SUSTAINING THEATER PROGRAMS IN UNDER RESOURCED ELEMENTARY SCHOOLS: A MIXED METHODS INTERVENTION EVALUATION

by

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Abstract

Arts education, particularly theater education, is declining in U.S. public schools and is especially scarce in elementary schools serving students from low socioeconomic backgrounds. Disney Musicals in Schools, an initiative designed to build sustainable theater programs in such schools, experiences school attrition as cohorts advance through the program. This mixed methods study evaluated the capacity of an online professional learning tool to improve teachers' theater production content knowledge, theater teaching self-efficacy beliefs, and theater program sustainability skills (partnership development skills, strategic planning skills, and capacity to maximize production and community resources). Eleven teachers participated in the six-month intervention study, which used a quasi-experimental, one group, pretest/posttest design combined with a convergent parallel design. The intervention significantly improved participants' theater teaching self-efficacy beliefs and foundational musical theater content knowledge. Although statistical significance was not demonstrated for production role specific content knowledge improvements, practical significance was achieved in five of six production roles. Participants reported strong, positive perceptions about the intervention's usability, and qualitative data revealed participants applied the professional learning to their practice. Low participation rates and inconsistent participation across school teams, however, indicate more research is necessary to understand the intervention's capacity to improve theater program sustainability skills and the relationships between the variables of interest. Most importantly, this applied research indicated empirically-based opportunities for improvement to the intervention, which will ultimately benefit school theater programs.

Keywords: Program sustainability, Disney Musicals in Schools, theater education, arts education.

Acknowledgements

Two weeks after the presidential election in 2016, I applied for a doctoral program determined to learn everything I could to make a positive contribution to a divided nation. As I conclude my doctoral journey, COVID-19 has devastated lives and the global economy. It is now June, 2020, and theaters and schools around the world are shut down. On the heels of my final defense, the murders of Breonna Taylor, Ahmaud Arbrey, and George Floyd again demonstrated a 400-year-old crisis of American racism and oppression. As the country grapples with dismantling racism and reopening schools in a post COVID-19 society, the future of equitable opportunity to learn is unclear. This dissertation is about the intersection of the arts and education. It is about kindling creativity, even when systemic forces attempt to position it as a privilege only for some. It is about building something sustainable. I began this journey with a desire for self-improvement and conclude it resolved to ensure school theater endures, especially in under-resourced schools. In 2016, author Toni Morison said, “This is precisely the time when artists go to work. There is no time for despair, no place for self-pity, no need for silence, no room for fear. We speak. We write. We do language. That’s how civilizations heal.” To the students and teachers making art: we need you more than ever.

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Arcadia, you inspire me. I hope I have shown you what a woman can be, because if you achieve even a glimmer of your potential you will change the world. I look up to you, even though you are only five.

Dedication

This dissertation is dedicated to my husband, Alex, for his endless sacrifice, support, and love and to my daughter, Arcadia, who demonstrates daily the limitless potential of human creativity.

It is also dedicated to the tenacious teachers in the Disney Musicals in Schools program who do whatever it takes to ensure their students experience the transformative benefits of the arts.

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Executive Summary

Theater education is limited in U.S. schools, with low socioeconomic status (SES) elementary schools facing the largest access gap (Parsad & Spiegelman, 2012). At the same time, the arts, and especially theater, are central to the human experience, with many seminal scholars stating their value and inherence to human learning and development (Dewey, 1934; Piaget, 1951; Vygotsky, 1972; Vygotsky, 2004). Additionally, there are well documented cognitive benefits of arts education (Burton, Horowitz, & Abeles, 1999; Catterall & Iwanaga, 1999; Fiske, 1999; Goldstein, Lerner, & Winner, 2017; Greenfader & Brouillette, 2017; JohnBull, Carran, & Shelton, 2019; Rose, Parks, Androes, & McMahon, 2000) as well as social-emotional advantages (Goldstein & Winner, 2012; Hetland, Winner, Veenema, & Sheridan, 2007; Holochwost, Wolf, Fisher, O'Grady, & Gagnier, 2017; Thomas, Singh, and Klopfenstein, 2015). With all this in mind, the disparity of access to theater education for students in low SES schools is particularly problematic.

To begin to address this problem, I developed the Disney Musicals in Schools program (DMIS). DMIS is a grant program that provides training and tools to teachers in hopes of developing sustainable musical theater programs in low SES schools. Although the program is initially successful, with over 90% of participating schools continuing to produce theater in the year following their initial DMIS residency, school participation rates begin to drop as cohorts advance through time. By a cohort's fourth year, for example, only about 50% of schools are continuing their DMIS-seeded theater program.

Factors and Drivers of the Problem of Practice

There are many factors and drivers of the problem of school attrition in the DMIS program, specifically, and of lacking theater programs in low SES elementary schools more

broadly. Chapter 1 presents a synthesis of the literature related to factors and drivers of the problem of practice. Using ecological systems theory (Bronfenbrenner, 1979) as a theoretical framework, the chapter reviews factors including: cultural capital and social reproduction, education policy, the purpose and perception of arts education, resources (including time, human resources, and funding), partnerships with arts organizations and teaching artists, collaboration dynamics, organizational knowledge, and program sustainability.

A thorough review of these factors demonstrated that although several are outside of the influence of DMIS, others may be actionable. Schell et al.'s (2013) Program Sustainability Assessment Tool (PSAT), assesses eight factors encompassing the actionable drivers explored in Chapter 1 (funding stability, partnerships, organizational capacity, program evaluation, program adaptation, communications, environmental support, and strategic planning), and served as the foundation of a needs assessment on school program sustainability in DMIS.

Assessing the Needs of DMIS Stakeholders

A sequential explanatory needs assessment revealed the nature of program sustainability in DMIS. The quantitative strand employed Schell et al.'s (2013) PSAT and additional measures. The questionnaire revealed four areas of need across three stakeholder groups (teachers, teaching artists, and arts organization administrators). The four areas of need were partnerships, funding stability, strategic planning, and satisfaction with school resources (especially arts professional learning for teachers). The qualitative strand revealed how these factors contribute to or impede a school's likelihood of sustaining a theater program seeded by DMIS. Participants noted teacher attrition, workload, lack of time, stress, burn out, bureaucratic barriers to funding, and lacking strategic plans as factors that might explain the quantitative findings. These needs assessment findings were the foundation of an intervention designed to improve the problem of practice.

Developing an Intervention

To develop the intervention, activity theory (Engeström, 1987) served as the theoretical framework that guided a review of the literature. The partnership literature identified best practices and common pitfalls to consider in the intervention; these included policy, the role of leadership, goal alignment, partnership structures, common challenges, potential school partners, and the impact of culture on partnerships. Literature on resources illuminated areas for improvement. Such resources include funding stability, professional learning, teacher stress and burnout, and resource pooling. Finally, the strategic planning literature uncovered essential processes for developing and implementing such plans. This foundational knowledge informed the development of the intervention. The intervention literature (Chapter 3) and the literature exploring the problem of practice (Chapter 1) additionally identified essential foundations of enduring school theater programs. These foundations include strong teacher theater content knowledge and positive theater teaching self-efficacy beliefs. The intervention, therefore, was designed to build these essential foundations while also providing teachers with the program sustainability skills identified by the needs assessment.

The intervention, StageConnect, is an online professional learning platform for teachers in the DMIS program. Because the needs assessment revealed the nature of program stability is multifaceted and context-specific, an intervention that could address the complex needs of schools was paramount. StageConnect provides DMIS teachers with online modules featuring instructional videos, demonstration videos, and downloadable templates and resources. The platform features three primary sections. The *Fundamentals of Musical Theater* course is taken by all teachers in the program, regardless of their theater production role. Next, the *Fundamentals of Your Role* courses are again completed by all participants, but are domain

specific (e.g., *Fundamentals of Directing, Fundamentals of Stage Management*). Finally, roles that are active during the rehearsal process have access to the *In-Rehearsal* section of StageConnect, which aggregates each role's full resources, organized sequentially by production milestone. Once StageConnect was built, all supporting videos were produced, and all additional resources were created, the intervention was ready to be evaluated.

Implementing the Intervention

Eleven teachers across six schools participated in the intervention, which took place October, 2019 to March, 2020. The participating schools were in one of three U.S. program cities. All participating schools had completed their first year of DMIS, although the six schools represented a variety of cohort years in the program. The following research questions guided the study:

- RQ1: Are the teachers using StageConnect receiving the proper amount, type, and quality of professional learning and programmatic support through the platform?
- RQ2: Do the teachers using StageConnect apply the professional learning, tools, and templates provided through the platform to their rehearsal process?
- RQ3: What are participants' perceptions of the StageConnect platform's usability?
- RQ4: What are the differences between teachers' pre- and post-intervention theater content knowledge?
- RQ5: What are the differences between teachers' pre- and post-intervention theater teaching self-efficacy?
- RQ6: What are the differences between teachers' pre- and post-intervention program sustainability skills?

    - RQ6a: What are the differences between teachers' pre- and post-intervention partnership skills and perceptions?
    - RQ6b: What are the differences between teachers' pre- and post-intervention theater program mission and goals?
    - RQ6c: How does the platform help participants maximize resources, including production resources and community resources?
- RQ7: What is the relationship between teachers' sense of theater self-efficacy, theater content knowledge, and teachers' program sustainability skills?

The quasi-experimental, mixed-methods study leveraged a one group pretest/posttest design combined with a convergent parallel design. Quantitative data were collected through the learning management system usage logs, a researcher developed theater production content knowledge assessment, a modification of a domain-specific teaching self-efficacy scale (Yoon & Evans, 2012), subscales on partnership and strategic planning skills (Schell et al., 2913), and the system usability scale (Brooke, 1996). Qualitative data were collected through three school team focus group interviews.

The results indicated that participants held favorable views of the amount and type of professional learning offered through StageConnect, although more research is necessary to understand if the volume of content or modality of delivery were barriers to broader participation. The SUS revealed strong, positive perceptions of StageConnect's usability, falling in the 98th percentile of all systems measured with the commonly used scale. The study also demonstrated a statistically significant improvement between participants' pre- and posttest content knowledge on the plenary *Fundamentals of Musical Theater* assessment. Although the

role specific assessments did not yield a statistically significant change, all but one role (directing) improved, demonstrating practical significance.

The study also revealed a statistically significant improvement in participants' theater teaching self-efficacy beliefs between administrations. This improvement was driven by gains in participants' pedagogical content knowledge self-efficacy and instructional self-efficacy. Due to low participation and challenges with implementation, more research is necessary to understand whether StageConnect can improve teachers' partnership skills, strategic planning skills, and satisfaction with resources. Neither the partnership nor strategic planning subscale demonstrated a significant improvement between administrations, and focus groups illuminated challenges that may have prevented more engagement with StageConnect's content on these topics. Still, both subscales improved between administrations, and for the producer role—where most of this content is housed—the improvement was practically significant. The focus groups also indicated improvements to help participants better maximize community and production resources.

Finally, more research is necessary to understand whether there is a statistically significant relationship between the variables of interest, although two did emerge from the study. There was a strong, positive relationship between the posttest total theater teaching self-efficacy score and directors' posttest content knowledge assessment. Additionally, there was a strong, positive relationship between the total sample's partnership scores and their strategic planning scores, suggesting that these skills are related. Most importantly, however, this small, mixed-methods study illuminated areas for improvement and new opportunities for future iterations of StageConnect.

Chapter 1: An Investigation into Factors of the Problem of Practice

This chapter synthesizes the literature on the factors influencing the presence and sustainability of theater programs in low socioeconomic (SES) elementary schools in the United States. The review begins with a snapshot of access to arts education in America before introducing its benefits. The problem of practice (POP) is then introduced, both broadly and in terms of the Disney Musicals in Schools (DMIS) context. Next, ecological systems theory is introduced as a theoretical framework, which is then used to examine the factors of the POP. This synthesis concludes by identifying gaps in the literature and summarizing the major factors contributing to the problem.

The Decline and Benefits of Arts Education

Arts education in American schools was once on the rise, growing from 20% of students taking any arts courses or lessons in the 1920s to over 50% by the early 1970s (Rabkin & Hedberg, 2011). Yet today, arts education has suffered a decline (Rabkin & Hedberg, 2011). As generations handed down this cultural capital and as more children stayed in school for longer periods of time, one might expect the number of students taking arts courses to also rise. Yet, beginning in the mid-to-late 1970s and continuing through 2008, this number has sharply declined, with the 2008 data reflecting a 23% drop in childhood arts course participation from 1982 levels (Rabkin & Hedberg, 2011). In 1982, 64.6% of 18-24-year-olds reported arts course participation in their childhoods, whereas in 2008 only 49.5% reported the same. Of more concern, this decline in access disproportionality impacted children of color, with White students' participation levels wavering only slightly—dropping from 59.2% of all 18-24-year-olds reporting arts course participation before the age of 18 in 1982 to 57.9% reporting the same in 2008—while African American and Latino students' participation rates dropped from 50.9% to

26.2% and from 47.2% to 28%, respectively (Rabkin & Hedberg, 2011). Although the survey of public participation in the arts has been administered twice since 2008, there has been no recent scholarly research examining arts education with that data. At the time of publication, COVID-19 has shut down schools and theaters across the globe. Although the impact of the pandemic on arts-education in the U.S. remains to be seen, it is feasible that further declines could occur.

Humanistic Arguments for the Arts

There are many arguments for the inclusion of the arts within a complete education, but perhaps most compelling is the arts' standing as an expressly human endeavor, central to our very existence. The earliest evidence of humans making art comes from the first ice age, some 40,000 years ago (McKie, 2012). These early carvings and sculptures were not merely literal representations of the surrounding world, but indicate that the development of imagination was a significant turning point for early humans (McKie, 2012). Humans are unique in our capacity to use symbolic systems to communicate and imagine (Gardner, 1982). The most obvious of these systems is written language, which is a well-studied construct in human development and central to formal education (Gardner, 1982). It is almost impossible to consider schools without speech, text, and other forms of language. Yet, the arts and creativity, also foundationally human, are inequitably available to U.S. children.

Seminal education theorists identified the arts as foundational to human learning and development. Vygotsky (1925/1972) suggested that human emotions, when processed through imagination, lead to the creation of original art (e.g., a poem, a play, a painting). Aligned with his sociocultural theory, Vygotsky (1925/1972) viewed art as a tool used in social environments. Although Vygotsky's views on the arts, creativity, and human emotion fall in the shadows of his brief and prolific career, this scholarship deserves due consideration. In a later work, Vygotsky

(1930/2004) identified creativity as uniquely human and central to the development of children. He further situates theater making as one of the most valuable expressions of childhood creativity:

> Drama, more than any other form of creation, is closely and directly linked to play, which is the root of all creativity in children. Thus, drama is the most syncretic mode of creation, that is, it contains elements of the most diverse forms of creativity. This, by the way, is the greatest value of having children stage dramatic works. The staging of drama provides the pretext and material for the most diverse forms of creativity on the part of the children (Vygotsky, 1930/2004, p. 71).

The prominence theater is given by one of the most significant education theorists should garner the attention of scholars and policymakers alike.

Dewey (1934), whose work explored learning through experience, also identified the importance of the arts. According to Dewey (1934), the performing and fine arts are experiences. As such, it is not the resulting performance or painting that is of value, but the process and experience from which they were developed. Dewey was a contributor to the concept of aesthetic experience, which paved the way for the aesthetic education movement and the work of Maxine Greene. Greene, a seminal voice in the field of arts education, became the philosopher in residence at the Lincoln Center for the Performing Arts, considered to be the birthplace of teaching artistry (Booth, 2010; Remer, 2003), which is discussed in a later section.

Other theorists—including Piaget (1951) as well as Bruner, Jolly, and Sylva (1976), who have studied pretend play, an early childhood form of drama—have also identified the arts as a uniquely human component of development. Despite this support, Goldstein, Lerner, and Winner (2017) urge for still more theoretical focus on the arts, which they claim are often overlooked.

Although each of the theorists discussed looks at the arts through a different lens, their prevalence within this body of seminal literature suggests that they are not a curious outcome of learning and development, but instead a central component to the way in which people encounter the world.

Theorists and scholars have embraced language as a construct within various learning theories (Ertmer & Newby, 2013; Gee, 2008; Schunk, 2012; Vygotsky, 1978). Although different theoretical perspectives claim that language plays differing roles in human development and learning, its presence and utility across many theories is undeniable. The same may be true of the arts. Although language is used throughout the lifespan, the daily use of art—once commonplace—is increasingly rare after early childhood. As Vygotsky (1930) noted, and as Piaget (1951) and Brunner et al. (1976) corroborated, pretend play and drama are natural and driving components of development. Although these developmental and theoretical humanistic arguments are compelling, arts education includes other benefits. As discussed next, many scholars suggest arts education includes cognitive advantages.

Academic Benefits

Inequity itself is problematic, but the disparity of access to arts education takes on more weight given its many academic and cognitive benefits. The arts can set students up for success through improved academic performance in core subjects like reading and math (Catterall & Iwanaga, 1999; Goldstein, Lerner, & Winner, 2017; Greenfader & Brouillette, 2017; Rose, Parks, Androes, & McMahon, 2000), better attention skills and improved transfer of knowledge (Deasy, 2002; Posner & Patoine, 2010), improved verbal skills (Podlozny, 2000), better performance by English language learners on tests (Greenfader & Brouillette, 2017), and even increased college attendance rates (Catterall, 2009).

Despite this robust evidence base, however, not all scholars agree that the arts can be credited with academic benefits. Winner and Cooper (2000) warn readers to exercise caution when considering such claims. The authors state that the elimination of school arts programs triggered research designed to advocate its value; while Winner and Cooper (2000) did find reliable evidence of many of the cognitive advantages claimed by arts education researchers, in many cases they were not able to identify causality, suggesting some such claims may be the result of epiphenomenon—associated with arts education, but not necessarily caused by it. It is possible that such findings are related to other factors, ranging from family interest and involvement, to income and geography. Similarly, through a meta-analysis, Goldstein, Lerner, and Winner (2017) found that few studies purporting academic improvement through the arts can claim causation. The authors' meta-analysis revealed no causal link in seven of the ten studies reviewed (Goldstein, Lerner, & Winner, 2017). Although some researchers did control for SES and other important variables, this concern has merit and should be considered when appreciating the full range of literature in this niche field. This dichotomy of scholarship is symptomatic of the conflicting goals of arts education, which are discussed later in this chapter. Despite Winner and Cooper (2000) and Goldstein et al.'s (2017) warnings, over twenty years of scholarly research on arts education suggests correlation or association with cognitive and academic gains and is frequently cited when discussing its merits. Further, the social sciences and the arts often operate outside the linear parameters of experimental science. Goldstein et al. (2017) themselves acknowledge that experimental science is sometimes considered a methodologically crude approach to the study of the arts. One recent and notable study, however, responds to lacking causal evidence of the academic value of the arts, employing an experimental design. In a randomized controlled trial of 16 fifth grade classrooms, Hardiman,

JohnBull, Carran, and Shelton (2019) determined that arts integration techniques used for teaching science led to better retention of information—particularly for struggling readers—than traditional instructional strategies. This empirical evidence is an important step in confirming some of the claims made by earlier arts education researchers. There are, however, many reasons the arts are an important part of a complete education, including social-emotional benefits.

Social-Emotional Benefits

The claimed benefits of arts education do not stop at academic advantages. The literature also uncovers many social-emotional benefits of arts education. One of the most compelling rationales is arts education's capacity to engage and motivate students. Israel (2009) found students were intrinsically motivated by the arts and argued that such motivation could transfer to other domains. Thomas, Singh, and Klopfenstein (2015) corroborated this, and noted that underachieving high school students who take arts courses are more likely to stay in school than their peers who do not, suggesting the capacity of the arts to engage students. Since the authors controlled for academic achievement and SES—that is, failing students of similar SES within the same school fared better if enrolled in arts programs—this evidence withstands some of the criticism noted by Winner and Cooper (2000) and Goldstein et al. (2017).

The literature also identifies the capacity of arts education to develop mindset. Holochwost, Wolf, Fisher, O'Grady, and Gagnier (2017) found that elementary school aged students who participated in arts programs demonstrated improved acceptance of others' ideas and an overall growth mindset (p. 5). Other researchers determined that arts education could foster the development of habits of mind—skills like persistence, intention, and awareness (Burton, Horowitz, & Abeles, 1999; Goldstein & Winner, 2012; Hetland, Winner, Veenema, & Sheridan, 2007). Two studies have demonstrated the capacity of the arts to develop empathy and

collaboration skills (Goldstein & Winner, 2012; Lobo & Winsler, 2006). Others found that the arts facilitate emotional expression (Connery, John-Steiner, & Marjanovic-Shane, 2010; Moneta & Rousseau, 2008), can lead to a reduction of stress (Brown, Garnett, Anderson, & Laurenceau, 2016), and can improve social skills (Lobo & Winsler, 2006). Catterall (2009) found that youth involved in the arts were more likely to be civically engaged in young adulthood; although this is the only study of its kind and more research would be necessary to draw connections, it is possible that exposure to arts education may even benefit future civic participation.

The Problem of Practice

Despite evidence of its value and its foundations in theory, theater education—like broader arts education—is minimal, and likely on the decline. In fact, of the arts disciplines typically offered in schools, theater education is at the bottom of the pile, second only (by a narrow margin) to dance (Parsad & Spiegelman, 2012; Rabkin & Hedberg, 2011). The literature here, however, is scarce, which itself may indicate that theater education is not a national priority. Only two studies provide credible, if somewhat contradictory, data on the topic. Rabkin and Hedberg (2011) suggested that while most of the arts disciplines plummeted between 1982 and 2008, theater education experienced a statistically insignificant increase (from 12% to 13% of nationally representative respondents). Parsad and Spiegelman (2012) supported the finding of minimal theater education and specified that the absence is the most drastic in elementary schools, where only one in twenty-five schools offered theater instruction in the 2009-2010 school year, down from one in five just ten years earlier. Such a drastic downward turn, as Rabkin and Hedberg (2011) pointed out, is atypical of the gradual declines expected in organic social change, and instead points to significant outside events as the cause, such as economic recession, significant policy change, or geopolitical events.

The extant research is also lacking in construct definitions for theater education, again suggesting its low value within public schools. In Rabkin and Hedberg's (2011) study, the dataset included self-reported childhood arts course or lesson participation, without specifying artistic discipline, frequency, or setting. In Parsad and Spiegelman's (2012) study, the authors note that—unlike music and visual arts—the number of employed theater specialists was too low for a representative sample. Instead, the authors opted to research theater instruction by surveying general classroom teachers. Accordingly, the authors investigated the presence of theater lessons in general classrooms, arts integration techniques leveraging theater, and the availability of theater professional development for general teachers, and they found that only four percent of elementary schools offered such instruction.

Of more concern, there is a growing gap in access to school theater instruction for students from low SES backgrounds (Rabkin & Hedberg, 2011; Stringer, 2014). Although most states have arts instruction requirements across grade levels (45 states require arts instruction in elementary and middle schools, and 42 require it in high schools), state laws vary in terms of the depth and nature of arts instruction (Arts Education Partnership, 2014). Furthermore, state law is one thing, but upholding the law is an entirely different matter. In New York City, for example, Stringer (2014) found that schools in high poverty areas like central Brooklyn and the South Bronx have a disproportionate lack of certified arts instructors and cultural partnerships, with over 42% of such schools failing to meet state law in terms of arts instruction. Although empirical evidence is lacking, many researchers corroborate this finding, stating that access to arts education is stratified by SES (Catterall et al., 1999; Dumais, 2002; Dwyer, 2011; Foster & Jenkins, 2017; Vermeersch & Groenez, 2015). Unsurprisingly, districts with more resources offer more arts education than their lower SES counterparts (Caterall, 2012; Dumais, 2002; McCarthy,

Ondaatje, Zakaras & Brooks, 2004). Of particular note, many studies confirm that reduced instructional time in the arts has disproportionally impacted students from low SES backgrounds (Gara, Brouillette, & Farkas, 2018; Government Accountability Office, 2009; Miksza & Gault, 2014). The effects of policy and the impact on resulting instructional time are discussed in more detail in later in this chapter.

Furthermore, the inequity is not confined to the school day. Since low SES schools often lack the specialized staff and supplementary funds to offer afterschool theater programs, and since families without discretionary income are constrained by finances, students from low SES backgrounds face this opportunity gap both in the school day and during out of school time (Jiang & Peguero, 2017; Vermeersch & Groenez, 2015; White & Gager, 2007). Jiang and Peguero (2017) found that participation in extracurricular activities is stratified by SES, race, ethnicity, and immigration generation (e.g., second generation American, etc.). White and Gager (2007) also found that participation is stratified by race and SES, and noted that gender also predicts participation, with girls being the least likely to participate. Vermeersch and Groenez (2015) added that proximity to arts programs is associated with participation; although cities (which have higher concentrations of low SES communities) are often arts hubs, certain neighborhoods have better access to arts districts and arts education programming than others.

Although access to in-school and out-of-school theater programs is the source of significant imbalance, inequitable opportunity to learn reaches into many environments. Family resources also play a role in a student's access to theater education (Catterall, 2012; Dumais, 2002; Foster & Jenkins, 2017; Fredricks, Alfeld-Liro, Hruda, Eccles, Patrick, & Ryan, 2002; McCarthy et al., 2004). Factors in the home are also associated with a student's likelihood of arts participation. Martin et al. (2013) found that children who have art supplies at home are more

likely to participate in community arts programs. Although Martin et al.'s (2013) findings do not imply causation—caregivers clearly influence a child's participation in activities as well as the resources available in the home—factors of the home microsystem may also facilitate access and exposure to the arts. Recalling the theoretical underpinnings of drama and play in early childhood (Brunner et al., 1976; Dewey, 1934; Piaget, 1952; Vygotsky, 1930), children from more affluent homes may have better access to the tools of the theater at a young age. From dress-up clothes for costumes to crayons for creating new worlds and toys that become props, access to these tools for learning could be impacted by limited resources, environment, and even childcare arrangements.

With the many academic and social-emotional benefits of arts education previously discussed, this disparity in access is problematic in that students have inequitable opportunity to learn. According to Gee (2008), opportunity to learn includes access to affordances (elements of the environment that can facilitate learning) and effectivities (the capacity of the learner to enact those affordances). Moreover, in Banks' (2015) principles for teaching and learning in a multicultural society, he noted that one element that contributes to equal opportunity to learn for all students is equitable access to extracurricular activities. Given the previously discussed access gap to theater programs, the inequitable access to extracurricular theater programs advantages some students over others, leading to a social justice problem.

Although missing out on the developmental, academic, and social-emotional opportunities for growth is problematic in itself, there is also evidence of negative outcomes that may be fueled by removing theater and dramatic play from schools. As previously discussed, play is an essential component to human development, and its removal does not only lead to students missing out on positive outcomes, it also has a detrimental effect related to stress. For

example, theater production includes opportunities to play, and play may act as a stress reliever for children (Miller & Allmon, 2009). As discussed later in this chapter, the high-stakes testing and accountability practices of the No Child Left Behind era led to a reduction in time for content outside the tested subjects (e.g., unstructured play, recess, theater, art), particularly in schools that were not meeting their accountability targets. Without access to the stress relief provided by such play-based activities, students may develop detrimental levels of stress. Since students from low SES backgrounds may develop stress from factors related to poverty (McEwen, 1998), this negative effect is additive for the students most likely to miss out on school theater programs. Allostatic load results from constant exposure to stress (McEwen, 1998) and people with high allostatic load experience consistent levels of adrenaline and cortisol, the short- and long-term stress hormones that are triggered when humans are in danger. Sustained levels of these hormones lead to a physiological state of consistent emergency, often described as fight or flight, and as a result the social-emotional skills previously discussed cannot develop (Heckman, 2006). Ellis and Del Guiudice (2019) built on the allostatic load model and developed the adaptive calibration model. In this model, the authors suggested, consistent exposure to stress does not simply stunt development of social-emotional growth. Rather, children assume to a vigilant state that can manifest as anxiety, aggression, or depression, or an unemotional state that can manifest as low empathy, uncooperativeness, and high risk-taking behavior. Although the removal of play and arts programs from schools is not the sort of traumatic event that would trigger allostatic load or adaptive calibration in students, students who experience such states due to other factors could miss out on the protective stress-release of play in schools lacking opportunities for such play.

Introduction to the Disney Musicals in Schools Program

Whether looking at it through a developmental, academic, social emotional, or mental health lens, the disparity of access to theater education is problematic. To begin to address this challenge, I developed the Disney Musicals in Schools (DMIS) program in 2010. DMIS is the signature education program of Disney Theatrical Group and was developed in response to the access gap in theater education. DMIS, which is free to schools, aims to develop sustainable musical theater programs in public elementary schools serving students from low SES backgrounds. In pursuit of this goal, DMIS provides a grant of in-kind goods and services to schools through a competitive application process. Selected schools, which must demonstrate both the need and capacity for this rigorous program, receive performance rights to the 30-minute Disney musical of their choice, adapted expressly for elementary school performers. Each show comes with a comprehensive kit of materials including student scripts, director's guides, accompaniment music tracks, demonstration videos, and more. More significantly, each school receives a 17-week residency from a pair of teaching artists who guide the students and teachers through the process of mounting their first school musical. As the goal of DMIS is to create sustained musical theater programs, the teaching artists aim to develop the skills of participating classroom teachers. Ideally, by the time a school reaches opening night, the teachers will have gained the skills necessary to continue producing a school play in the future. Teaching artists in the program are trained on teaching such skills to teachers, and formative assessments administered by partner arts organizations allow program managers to monitor progress and offer support as necessary (Disney Musicals in Schools, n.d.).

Just as DMIS teaching artists transition ownership of the production to teachers, the program also scales back its in-kind gifts of teaching artists and materials over three years to

gradually require schools to build their capacity and autonomously run a theater program. This model is intended to provide schools with the time and training necessary to build their skillset and financial capacity over the course of three years. In addition to Disney Theatrical Group's self-managed program serving New York City public schools, the program is now available in 25 cities and growing through partnerships with performing arts centers, regional theaters, and children's theaters. Since launching in 2010, approximately 45,000 students from low SES backgrounds have participated in the program, representing some 200 schools and almost 1,000 teachers (Disney Musicals in Schools, n.d.). Additionally, 25 partner organizations employ a network of approximately 220 teaching artists, who bring the work to life on school stages in the U.S. and U.K. (Disney Musicals in Schools, n.d.).

The Problem of Practice in the DMIS Context

Although DMIS has had success, the larger problem (a lack of theater programs in low SES elementary schools) begins to manifest within DMIS as schools advance through the program. Though the program is increasingly successful in retaining schools in the year following their initial participation (with current retention rates for year two schools around 90% nationally), even minimal attrition represents a missed opportunity for hundreds or thousands of students over time (Disney Musicals in Schools, n.d.). More significantly, however, schools begin to discontinue their theater programs more substantially in the third and fourth years after the DMIS residency, with an average continuation rate of only approximately 50% nationally in fourth year and beyond schools (Disney Musicals in Schools, n.d.). Although Disney Theatrical Group's in-kind donations of performance rights and rehearsal materials (e.g., scripts and director's guides) reduces over time and concludes by a school's fourth year, it is evident that some schools are able to sustain their theater programs while others are not. This phenomenon

itself is worthy of investigation. Even if the removal of Disney Theatrical Group's nominal support (such rights and materials have an average retail value of $500 per year) is a barrier to sustainability, such a finding could influence a revision of the grant program itself. Whether due to available resources or any number of other factors, some schools continue their theater programs after participating in DMIS and others do not. It is possible, then, that the conditions that typically prevent low SES schools from offering theater education in the first place also contribute to discontinuation rates in the DMIS program. Given the many systems, environments, and stakeholders that influence the POP, identifying a framework that spans these dimensions becomes paramount.

Theoretical Framework: Ecological Systems Theory

Ecological systems theory states that four concentric systems influence an individual, with a fifth system spanning time (Bronfenbrenner, 1979). These five systems include the (a) microsystem, (b) mesosystem, (c) exosystem, (d) macrosystem, and (e) chronosystem. The concentric nature of these systems, along with a summary of their definitions, are presented in Figure 1.1.

Ecological systems theory begins with the microsystem, which includes the direct, daily experiences of the central individual (Bronfenbrenner, 1979). Importantly, Bronfenbrenner (1979) places the individual at the center of the concentric model, from which all the systems are established.

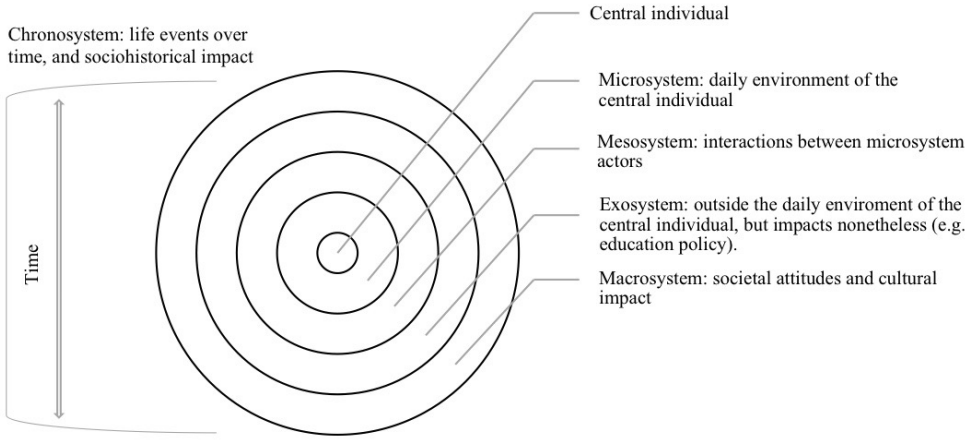

Figure 1.1. Bronfenbrenner's (1979) concentric model of ecological systems theory. Adapted from "The Ecology of Human Development: Experiments by Nature and Design," by U. Bronfenbrenner, 1979.

For example, if a teacher is the central individual, the microsystem includes her interactions with her family, students, and colleagues. If her principal pulled a student aside for a discussion, however, that interaction would not occur at the microsystem level. Although both participants fall within the central individual's microsystem, the interaction would be considered at the mesosystem level, as the teacher herself is not a participant. Accordingly, Bronfenbrenner (1979) notes that the mesosystem includes interactions between members of the central individual's microsystem, but outside of the microsystem itself.

Moving outward in the concentric model, the exosystem removes a level of direct connection to the central individual. According to Bronfenbrenner (1979), whereas the microsystem and mesosystem involve people within the individual's daily world, the exosystem comprises factors that directly impact the individual, such as effects of education policy, but that are outside the direct environment. Taking another step outward, the macrosystem comprises societal attitudes and phenomena that impact the central individual. Within the context of school

theater programs, such macrosystem factors could include society's valuing of the arts. Bronfenbrenner's final level, the chronosystem, falls outside of the concentric model and spans time (Bronfenbrenner, 1979). The chronosystem includes the impact of transitions over the lifespan, such as a change in family structure—the focal individual getting married, for example— or a societal shift— such as marriage equality. Ecological systems theory is a useful tool for examining the POP; by considering the stakeholders, events, and constructs within the various system-levels, a holistic view of the problem's drivers emerges.

Contributing Factors of the Problem

A review of the literature suggests multiple factors, spanning all five ecological systems, contribute to the POP. Although factors at the mesosystem or microsystem level will be most actionable within the DMIS context, it is important to situate the problem within the broader landscape of literature to understand its complex drivers. In addition to providing a foundational knowledge base from which to consider interventions, this synthesis grounds future findings in the literature, ensures they are applicable in broader contexts, and uncovers under-researched aspects of the POP.

Although there are likely a multitude of contributing factors, a review of the literature indicates recurring reasons that theater programs do not exist or are not sustained in elementary schools serving low SES students. These factors include problems related to cultural capital, education policy, perceptions of arts education, resources (inclusive of factors associated with teachers and principals), and school partnerships with arts organizations and teaching artists. This spectrum of drivers will be reviewed here, starting with the widest problems of the chronosystem before funneling down to the most specific problems in the microsystem. Figure 1.2 overlays the POP on ecological systems theory, and includes examples of individuals and

contributing factors at each system level.

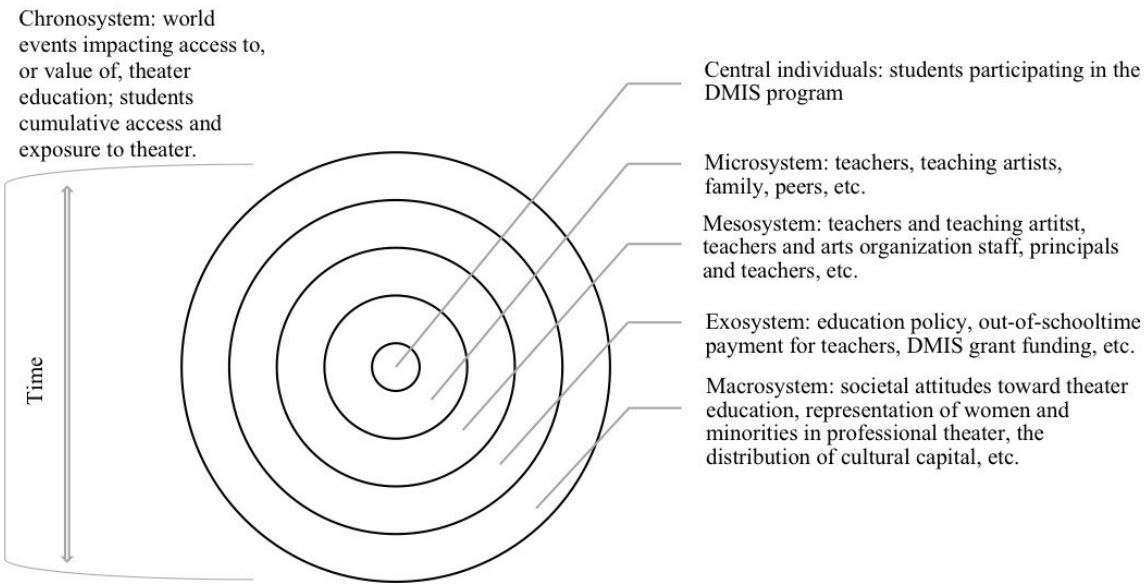

Figure 1.2. The DMIS program overlaid on Bronfenbrenner's (1979) ecological systems theory model. The illustration includes individuals and factors of the problem at each system level. Adapted from "The Ecology of Human Development: Experiments by Nature and Design," by U. Bronfenbrenner, 1979.

Cultural Capital and Social Reproduction

According to Bourdieu (1986), cultural capital is one of the non-financial resources individuals benefit from throughout life. Such resources can be categorized as embodied (e.g., an individual's accent), objectified (e.g., a person's property, like the type of car they drive), or institutionalized (e.g., their university's perceived pedigree; Bourdieu, 1986). This construct exists at both the chronosystem and macrosystem level and functions as both a driver and an outcome of the POP.

Cultural capital and arts consumption. Attendance at arts events has long been a contributor to cultural capital for elites (Bourdieu, 1984; DiMaggio & Useem, 1982; Ostrower, 1998). That is, an individual who attends theater performances gains cultural capital by doing so.

Although a broader distribution of the cultural capital afforded by theater participation may erode its value to elites over the span of the chronosystem, in the shorter term it is handed down socially. As such, societal exposure to the arts privileges some groups and excludes others, which has problematic implications for equity and access. Since cultural capital is socially reproduced (Bourdieu, 1986)—that is, attending a play enhances one's cultural capital and makes one's family and social circle more likely to attend plays—it may be likely that as more groups gain access to cultural capital, the previous holders of its power develop new forms to preserve their elite status. Elias (1978) illuminated this point by discussing the evolution of silverware usage across social classes. After medieval European societies had almost universally adopted the use of knives, forks, spoons, and napkins during mealtimes, elites began adding additional utensils to their gatherings. Over time, specialized cutlery like forks for fish and knives for butter were added to the table. As lower classes adopted these conventions, elites added still more pieces, preserving the cultural capital gap whenever the lower classes caught up. This phenomenon may also play out as people from lower SES backgrounds gain more cultural capital from theater exposure. At the chronosystem level, however, DiMaggio and Mukhtar (2004) found that audiences are already declining for most art forms, including theater and musical theater. Attendance at musical theater performances dropped 9.7% between 1982 and 2002 (the most current data available), with the largest drop occurring within the "youngest cohorts in the population, suggesting a failure of these art forms to renew their audiences" (DiMaggio & Mukhtar, 2004, p. 179). Given social reproduction, it is possible that the decline in arts audiences at the youngest level indicates a lack of cultural capital that would propagate attendance. In contrast to DiMaggio and Mukhtar's (2004) findings, the Broadway League, which is the professional organization for Broadway producers and theater owners, reports that Broadway

audiences have been growing since the 1980s (Broadway League, 2018). Yet since Broadway ticket prices are at an all-time high and the average household income of a Broadway theater goer is a staggering $194,940 (Broadway League administrative data, 2018), it is likely that such audiences are stratified by SES. The Broadway League also reports that only 23% of all 2016-2017 season tickets were purchased by "non-Caucasian theatergoers," suggesting additional stratification by race (Broadway League administrative data, 2018).

This factor is also evident in the macrosystem. Since access to arts education experiences during the school day dropped within the cohorts investigated in DiMaggio and Mukhtar's (2004) study (Rabkin & Hedberg, 2011), it is plausible that arts-education is a contributor to cultural capital and its decline is manifesting in generations opting out of arts consumption. But not all research supports the idea that the decline in audiences is a result of declining cultural capital. Van den Broek (2013) corroborates that arts audiences are declining, but suggests the decline is related to time—not cohort—noting that today's audiences have more options for entertainment and use of discretionary income. Even so, if the performing arts are to survive in today's landscape of entertainment options, the cultural capital and exposure developed through school arts programs are essential. Although ubiquitous access to the art form might remove it as a form of cultural capital, sharing its benefits widely should be a priority of both the theater industry and educators.

Cultural capital and arts participation. In addition to arts consumption (e.g., attending a play), arts participation (e.g., performing in a play) is a contributor to cultural capital with its own implications for access and equity. Reeves (2015) found that, unlike arts consumption, neither social status nor social class were associated with arts participation in British adolescents and adults. Instead, the researcher found that educational attainment was the only predictor of

arts participation, which included disciplines ranging from poetry, to woodworking, to opera, to textile work and singing (Reeves, 2015). According to Bourdieu (1986), institutionalized cultural capital, such as the level and institution of educational attainment, is one of the three primary types of cultural capital. Therefore, arts participation can be linked to cultural capital and social reproduction, placing it in the macrosystem. Beyond the implications for equity and access, this also has problematic repercussions in terms of representation on stages. If a homogenous group benefits from arts participation in childhood, that group will be disproportionally advantaged and represented in the professional theater.

According to Reeves (2015), those with lower education levels are least likely to participate in the arts. At the same time, as Miksza (2013) pointed out, community demand for the arts is a predictor of a principal's satisfaction with their school's arts education resources. Since adults with low education levels are the least likely to participate in the arts—and the most likely to live in low-income communities—they may be less likely to demand such opportunities for their children, pointing to a disparity of access fueled, in part, by the distribution of cultural capital. Rabkin and Hedberg (2011) corroborate this and confirm that arts education is one of the biggest predictors of future participation in the arts, thus positioning arts education as cultural capital that leads to future arts participation.

Further, Friedman, O'Brien, and Laurison (2017) found that British working-class actors do not have the same access to economic, cultural, or social capital as their middle-class peers, and identified a "class ceiling," inclusive of lower pay, restricted career mobility, and even negative typecasting for actors from working-class backgrounds (Friedman et al., 2017, p. 1005). Such research situates the POP as having repercussions outside of schools, impacting the demographic composition and future stability of the professional theater industry. DiMaggio and

Mukhtar (2004) found that audiences are opting out of traditional euro-centric performances and into art that better represents a diverse racial and ethnic demographic, suggesting a macrosystem shift in attitudes and behavior. At the same time, artists from minority racial and ethnic backgrounds are under-represented in the professional theater landscape (Friedman et al., 2017). Since SES and racial and ethnic background are linked (Semega, Fontenot, & Kollar, 2017), the significant class stratification of the acting profession does not bode well for diversity and representation on professional stages. This illuminates some of the systemic oppression that preclude lower SES communities' participation in the arts and positions universal access to school arts programs as vital both for equity and for the future of the theater industry. Since both arts consumption and arts participation may be stratified by cultural capital, it is important to consider how education policy impacts the equitability of arts education in schools.

Education Policy

Just as the chronosystem and macrosystem aspects of cultural capital lead to social reproduction that precludes access to theater, the exosystem factor of education policy directly impacts the availability of theater education. The arts have had unsure footing in education policy throughout U.S. history, but the reauthorization of the Elementary and Secondary Education Act in 2001, more commonly referred to as No Child Left Behind (NCLB), shepherded in systems of accountability that were particularly damaging to the arts (Chapman, 2004). Although NCLB has concluded, and the somewhat more arts-friendly Every Student Succeeds Act (ESSA) took effect in the 2017-2018 school year, it is possible that the damage done by NCLB will have lasting repercussions.

One of the hallmarks of NCLB was its focus on the assessment of math and English language arts. These assessments were intended to hold schools accountable for delivering on

their promise to provide a basic, quality education to all students. Given the high-stakes of this accountability, however, with threats of school closure and teacher and administrator jobs on the line, schools were pressured to take steps to meet their annual yearly progress (AYP), the benchmark by which they are measured. AYP assessed student test score gains according to the school's plan to meet state standards for all students by a certain time (Chapman, 2004; Government Accountability Office, 2009). AYP performance was a measure of student achievement on standardized English and math tests, and schools with the lowest performing students were forced to take measures to ensure progress in these two subjects. As a result, schools often funneled resources—including time and money—toward gains in these areas (Ruppert, 2006; Vasquez-Heilig, Cole, & Aguilar, 2010).

NCLB and instructional time. The lowest performing schools in the U.S. predominantly serve students from low SES backgrounds and children of color (Duncan & Murnane, 2011). As such, the effects of NCLB disproportionally impacted these populations, who attended schools facing pressure to achieve their AYP. As a result, such students were often scheduled to receive more instructional time in English language arts and math, to the detriment of other subjects (Chapman, 2004; Ruppert, 2006; Vasquez-Heilig, Cole, & Aguilar, 2010). This outcome impacted students, demonstrating the power of exosystem factors within the context of schools.

McMurrer (2008) found that one of the effects of NCLB in elementary schools was decreased instructional time in the arts in favor of increased time in English and math. From a nationally representative sample, McMurrer (2008) found that 16% of districts reported decreases in instructional time for art and music. These schools, however, did so by 35% on average—the highest percentage of reduction across all impacted subjects, tied with physical education (McMurrer, 2008). It is important to note that McMurrer's study only assessed

instructional time in visual arts and music; since only 4% of elementary schools offer theater instruction (Parsad & Spiegelman, 2012) it is possible that instructional time eroded there as well.

Gara, Brouillette, and Farkas (2018) supported this idea. In their early childhood longitudinal study, the researchers studied two cohorts of participants to understand how NCLB impacted arts education in the early elementary years. Gara et al. (2018) found that the number of teachers reporting no instructional time in the arts rose significantly between the 1999-2000 data and the 2011-2012 data, with the largest reductions affecting students from low SES backgrounds. Of the four art forms studied—visual arts, music, theater, and dance—the largest declines happened in theater, which saw a 16% drop (Gara et al., 2018). The researchers noted that many teachers stopped offering theater instruction entirely during NCLB. Interestingly, however, the teachers who sustained theater instruction during NCLB actually increased the amount of instructional time students received (Gara et al., 2018), suggesting that certain educators perceived the benefits and value of theater education.

NCLB and funding. Instructional time was not the only exosystem impact resulting from NCLB. Like everything else, school theater programs cost money. Teacher salaries, partnerships with artists and organizations, scripts, performance rights, and supplies for costumes, sets, and props, all add up in a climate in which many schools were asked to do more with less. While an economic recession undoubtedly influenced budgets across the board, NCLB also funneled money away from arts programs and into content areas deemed a higher priority (Chapman, 2004; Grey, 2010).

After the implementation of NCLB, almost every Bush administration budget proposed the elimination of the arts in education program, which provides funding to support school arts

programs (U.S. Department of Education, 2004, 2005, 2007, 2009). The arts in education program grants place a priority on schools serving students from low SES backgrounds. The program, which was never fully eliminated but received unstable and often reduced funding (with an almost eight million dollar drop between the noted appropriation in 2004 and the appropriation in 2018), was again on the chopping block in President Trump's proposed fiscal year 2018 budget (U.S. Department of Education, 2018).

Although unstable and reduced federal funding impacts arts education, the majority of a school's budget is allocated from the state and local levels (Chapman, 2004). As such, the strains schools face from AYP requirements directly influence school-level budgets. Schools in jeopardy of not meeting AYP targets funnel money toward math and reading support, often forcing the reduction or elimination of staff and materials that support untested subjects, like the arts (Beveridge, 2010; Grey, 2010).

The Every Student Succeeds Act. In 2015, Congress reauthorized the Elementary and Secondary Education Act in a revision of the law entitled the Every Student Succeeds Act (ESSA; The Every Student Succeeds Act, 2015). ESSA, with its wider view of education, opened up opportunities for policymakers, administrators, and teachers to reignite the arts in schools. The law requires districts to submit proposals to states for providing a "well-rounded education" to students (ESSA, 2015). Although the arts were previously defined as a core subject under NCLB (Jones & Workman, 2016), the designation held little water due to the constraints of instructional time and resources previously noted. ESSA, however, defines a well-rounded education as one that "includes the arts, humanities, science, social studies, English, and mathematics" (Jones & Workman, 2016, p. 1).

ESSA includes funds earmarked for the pursuit of a well-rounded education. Gara et al. (2018) noted that to receive such funds, districts must develop a research-backed proposal demonstrating how the initiative would improve student achievement. Although ESSA removes the limited focus on English and mathematics previously forced through NCLB, the broadened policy nevertheless prioritizes arts integration approaches, albeit among a wider group of academic disciplines (e.g., science, technology, engineering, and math; Ludwig, Boyle, & Lindsay, 2017). The Education Commission for the States partnered with the Arts Education Partnership, an advocacy group comprised of member organizations with a stake in arts education, to publish a document entitled *ESSA: Mapping Opportunities for the Arts,* which provides paths for schools and districts to better support arts programs through the law (Education Commission for the States & Arts Education Partnership, 2018). The options suggested in the document include submitting state plans for assessment in the arts, detailing how the arts can fill the requirement for a well-rounded education, and using participation in the arts for career readiness accountability, student engagement accountability, and school climate accountability (Education Commission for the States & Arts Education Partnership, 2018). While ESSA undoubtedly opens up more opportunity for arts-rich climates in schools, only time will tell if this exosystem shift will lead to calls for more formal assessment in the arts, diluted arts-integration models, or an arts education renaissance.

The Purpose and Perception of Arts Education

As seen in the Education Commission for the States and the Arts Education Partnership's (2018) recommendations to schools, the goals of arts education are a source of conflict that could contribute to a sense of ambiguity for policymakers, educators, and other stakeholders, and thus could impact the presence and sustainability of school theater programs. To better understand the

conflicting goals of arts education, it is important to understand its history. The literature is sparse and lacks a comprehensive history of arts education in the U.S., but by synthesizing pieces on policy, perception, and partnerships, a picture begins to emerge depicting an unstable past that directly influences the present discourse on the value and purpose of arts education. This history demonstrates the impact of the chronosystem and macrosystem on the POP.

A tumultuous history. Since the beginning of recorded history, the arts have suffered a conflict of public opinion. At times heralded as a direct connection to the divine (Jorgensen, 1994) or disparaged for ungodliness (Wagner, 1999), pursued for their utility (Vazquez-Heilig, Cole, & Aguilar, 2010) or for their aesthetic fulfillment (Greene, 2001; Remer, 2003), the arts have experienced a dualism with roots stretching back to Plato and Aristotle (Weltsek, Duffy, & Carney, 2014). This ancient bifurcation has manifested in a disjointed and inconsistent approach to arts education in American schools, indicating how effects of the chronosystem and macrosystem can lead to inequity.

By the end of the 18th century, the arts found their way into U.S. schools, albeit for their practical utility. Vasquez-Heilig et al. (2010) noted that the visual arts were offered in schools as preparation for employment in industrial occupations. Yet by the 1900s, a growing middle class had access to more time and money, and a movement began that demanded access to this cultural capital for their benefit (Vasquez-Heilig et al., 2010). During the progressive era, the previously noted focus on experience and the importance of play (Dewey, 1934) shepherded in "studio-based" arts learning in schools (Vasquez-Heilig et al., 2010, p. 137). However, the Great Depression brought with it school closures and drastic budget cuts, and many thriving school arts programs were eliminated (Efland, 1983; Vasquez-Heilig et al., 2010).

Beginning in the 1930s, new evidence of the conflicting role of the arts in education emerged. With new research focusing on the way in which children learn, the arts were acknowledged for their capacity to teach other disciplines (Vasquez-Heilig et al., 2010). This conflict of purpose—arts for arts' sake versus arts integration—is today a central debate within the field of arts education. Remer (2003) noted that during the 1930s and 1940s, classroom teachers taught the visual arts and music, with folk dance occasionally offered in physical education, and theater studied as written text in English classes.

By the 1950s, the economy had recovered and new funding and specialist teachers were again supporting school arts programs (Remer, 2003; Vasquez-Heilig et al., 2010). The launch of Sputnik, however, disrupted education in the U.S. (Tyack & Cuban, 1995). Driven by fear of losing a global advantage, U.S. schools emphasized math and science to the detriment of the arts and other lower priority subjects (Vasquez-Heilig et al., 2010). Although in-school arts instruction was affected, Remer (2003) noted that school trips to arts organizations took place, though there is no evidence of curricular engagement between schools and arts organizations. There is, however, some evidence that artists were engaged by schools to offer performances on school grounds (Remer, 2003).

By the early 1960s, arts education advocates had galvanized support, and a deliberate push toward preserving the arts in schools was underway (Vasquez-Heilig et al., 2010). Government-backed research made the case for the arts (Remer, 2003; Vasquez-Heilig et al., 2010), and by 1965 the newly established National Endowment for the Arts (NEA) set the tone for the importance of the arts to schools and society, indicating a chronosystem shift (Remer, 2003; Vasquez-Heilig et al., 2010). During this era, the NEA formalized a new model of arts instruction. Classroom and specialist arts teachers were no longer the only deliverers of arts

education; instead, the NEA launched the arts in education program, which placed artists in schools to teach (Remer, 2003; Vasquez-Heilig et al., 2010). The program established a new model that enriches and complicates arts education to this day (Remer, 2003).

In the first half of the 1970s, arts education flourished. Through the NEA's arts in education program, partnerships between schools, cultural organizations, and artists became commonplace (Remer, 2003). In the latter part of the decade, however, things went south. With another economic downturn, the arts again demonstrated their precarious footing in schools. In Chicago, for example, all elementary school music and visual arts teachers lost their jobs, while New York City's fiscal crisis of 1975 all but eliminated arts education from the vast public-school system (Rabkin & Hedberg, 2011). Schools increasingly looked to arts organizations, such as theaters and museums, to provide the missing arts instruction communities had come to expect (Remer, 2003).

During the Reagan administration, the publication of *A Nation at Risk* (Gardner, Larsen, Baker, Campbell, & Crosby, 1983) ignited the back-to-basics movement and made a series of recommendations for educational reform. This standard education pendulum effect impacted arts education significantly. Although Remer (2003) suggested the arts are not mentioned at all in *A Nation at Risk*, a close look at the document reveals otherwise. The authors acknowledge that some may be "concerned that an overemphasis on technical and occupational skills will leave little time for studying the arts and humanities that so enrich daily life" (Gardner et al., 1983, p. 10), providing an eerie glimpse into the deliberate removal of the arts from education. The document references the arts five times, alternately suggesting that they should complement a basic education, be used as a tool for engagement prior to high school, and be positioned as elective vocational training for high school students. Finally, Gardner et al. (1983) call on the

NEA itself to be a thought partner in the presumed educational crisis the document was intended to address.

The NEA, it appears, heeded the call. The organization published *Toward Civilization: A Report on Arts Education* (National Endowment for the Arts, 1988) which documented the results of a congressional study into the state of arts education in American schools (Vasquez-Heilig et al., 2010). The report suggested the NEA should not exclusively support visiting artists in schools, and made recommendations for certified arts specialists, assessment in the arts, and sequential, required instruction (National Endowment for the Arts, 1988; Vasquez-Heilig et al., 2010), mirroring the foundations of the accountability climate established in the broader education landscape at the time (Vasquez-Heilig et al., 2010).

By the mid-1990s, the voluntary *National Standards for Arts Education* (National Association of Music Teachers, 1994) were established (Vasquez-Heilig et al., 2010), marking the first such arts-specific standards of their kind. These standards ultimately paved the way for the inclusion of the arts in the Goals 2000: Educate America Act (1994), designating the arts as core subjects for the first time in federal policy. This priority, however, was short-lived. When NCLB was signed into law, the previously noted eradication of the arts in schools began. Despite ancient debates, shifting policies, and significant historical events, NCLB was perhaps the most damaging moment in American arts education history.

The diluted purpose of arts education. Given the tumultuous history of arts education, it is no wonder the field suffers from mixed macrosystem messages about its function. As Remer (2003) noted, arts education has been varyingly positioned over time as “mere frills, appreciation, or basics” (p. 70). Jorgensen (1994) also tracked the historical course of music education, noting that it has been justified as of intrinsic, utilitarian, or aesthetic value at different

points in time. Vasquez et al. (2010) corroborated this, and also added that the arts began being implemented as an instructional tool for other subjects—a strategy known as arts integration—which could further complicate their position and function in schools. Arts integration seems to fall in and out of fashion as attitudes toward the function of the arts swings from basics to frills and back again, pointing to both the tenacity of arts education's advocates and the ambiguity of its messaging.

In their study of arts-specialty high schools' mission statements, Gaztambide-Fernandez, Nicholls, and Arriz-Matute (2016) illustrated how this macrosystem ambiguity manifests at the school level. The authors used Efland's (1990) streams of influence as a conceptual framework for the study, which outlines various rationales used to justify arts education. They are expressionist (artistic self-expression), reconstructionist (the arts as social justice), and scientific rationalist (the arts as a modality for different types of learners; Efland, 1990). The authors add a fourth element to the framework, vocationalist, which positions the arts as a future career. The researchers found the mission statements torn between these frames. They concluded that arts-specialty high schools were concurrently attempting to broaden and narrow arts education: broadening by virtue of their lofty statements of using the arts for a range of academic and social purposes, and narrowing by limiting their students to those who had successfully auditioned, typically from a more privileged background, thus contributing to social reproduction. This study exemplifies the complexities of arts education; macrosystem factors of cultural capital, goals, and perception are interwoven, complicated by the exosystem (e.g., policy) and the chronosystem (e.g., a rocky history).

Resources

Thus far, this chapter has discussed how elements of the chronosystem, macrosystem, and exosystem can erode theater education in low-SES schools, but school theater programs ultimately exist in the mesosystem and microsystem. Factors resulting from history, policy, perception, and goals manifest in the resources available to develop or sustain theater programs. Such resources include both human (e.g., teachers, administrators, and community members) and financial resources.

Teachers. Theater—especially musical theater—is a collaborative art requiring a team of educators to serve as the producers, directors, choreographers, designers, and stage managers of the school play. Even when students themselves assume these roles, a capable educator facilitates the process and guides the learning, especially in elementary grades. As a result, mesosystem and microsystem factors impacting educators in low SES schools inevitably influence the environment necessary to offer and sustain school theater programming.

Attrition, salary, bandwidth, and quality. One of the biggest challenges in developing school theater programs is the consistent attention necessary to lay their foundation. Teacher attrition is a challenge that disproportionally affects schools serving low SES communities (Adamson & Darling-Hammond, 2012). Loeb, Darling-Hammond, and Luczak (2005) found that working conditions, like class size and facility conditions, were the biggest predictor of teacher turnover in California. The authors note that the largest class sizes were reported in schools serving predominately Black and Latino students, with facility conditions reported as the most deteriorated in low SES environments. Adamson and Darling-Hamond (2012) had similar findings and added that such schools have less-qualified teachers and experience higher teacher turnover. Yet the problem of teacher attrition is not insurmountable. In a qualitative study, Brown

and Wynn (2007) found that principals who were most successful in retaining new teachers appreciated their needs, provided support, and were dedicated to their own professional growth and that of their staff.

Teacher salary, too, has consequences that benefit higher SES communities. Adamson and Darling-Hammond (2012) found that school spending and teacher salaries were inequitable in schools across California and New York, with an almost three-to-one disparity between school spending (inclusive of teacher salaries) in high SES districts and their low SES counterparts. But such teachers are not only paid less, they also work more. Using nationally representative data, Barbarin and Aikens (2015) found that higher reading scores were associated with higher SES schools, higher teacher beliefs in their students' capacity to succeed, and lower teacher workload. The authors also found that teachers working in lower SES schools tended to be less qualified, as measured by experience, education, and credentials (Barbarin & Aikens, 2015). In schools serving students from low SES backgrounds, then, a picture begins to emerge of overworked, underpaid, inexperienced teachers who often leave the profession or take teaching positions in schools they perceive to have better conditions. If higher SES schools have higher paid teachers who have more bandwidth and less turnover, it is no wonder they are more likely to offer theater programs than lower SES schools, indicating that these factors of the mesosystem and microsystem impact the POP.

Training and self-efficacy in teaching theater. Other drivers of the problem span the full SES spectrum. Most instruction in elementary schools is delivered by generalist teachers. While visual art and music specialists are more common in elementary schools, elementary theater specialists are rare, with 32 states offering theater or drama certification most typically at the high school level (Arts Education Partnership, 2014). It is likely, therefore, that the 4% of

elementary schools that offer theater programs (Parsad & Spiegelman, 2012) are either among the few with theater specialists on staff or have generalist teachers taking on this work. Because of this trend, DMIS is built to train generalist elementary school teachers in the basics of theater production (Disney Musicals in Schools, n.d.). Teachers' professional development and belief in their capacity to teach theater, therefore, are essential components in the success of elementary school theater programs and are thus drivers of the POP in the microsystem.

Self-efficacy is a person's belief in their capacity to achieve certain results (Bandura, 1977). In a study on preservice elementary teachers' perceptions about teaching drama, Russell-Bowie (2013) found that U.S. teachers scored significantly lower than teachers in other counties when it came to confidence in teaching drama. There are many factors that may contribute to such a finding, ranging from cultural capital and social reproduction, to the demographic makeup of the U.S. teacher workforce, to the differently held values of theater in other countries. Bresler (1993) found the same was true of generalist teachers providing music instruction, noting that teachers revealed they were not comfortable teaching music without the requisite background. It follows then, that proper professional development could boost teachers' self-efficacy concepts about teaching musical theater. The literature supports this. Kenny, Finneran, and Mitchell (2015) found that preservice generalist teachers who receive basic arts education training are more confident in teaching the arts than those without such training. Tanriseven (2013) found similar results, adding that preservice generalist teachers who are given the opportunity to facilitate drama instruction during training programs report higher self-efficacy in teaching theater than those who do not.

The underlying need for professional development, however, could also negatively impact self-efficacy concepts. Lackey and Huxhold (2016) found that teachers who went through

a rigorous professional development program to transition a school to an arts integrated model noted their extreme workload. Many of the teachers referenced feeling like a first-year teacher again, as they navigated arts subjects in which they had no background (Lackey & Huxhold, 2016). According to Bandura (1977), self-efficacy is nurtured through mastery experience, observing modeled behavior, social persuasion, and physiological feedback. The self-efficacy concepts of the teachers in Lackey and Huxhold's (2016) study may have been affected by an accelerated training with little room for mastery, the most impactful of the constructs for developing self-efficacy (Bandura, 1977). Since DMIS features rigorous and time-consuming professional development for non-arts teachers, this finding is relevant.

Funding. The presence, capacity, training, and self-efficacy of teachers may be irrelevant if schools do not have the financial resources necessary to support the production of a school play. School funding is often initiated in the exosystem before impacting the micro and mesosystems, where district and community resources dictate the daily reality in the school. In cash-strapped schools, money for materials and performance rights can be scarce, and it follows that lower SES communities would be at a disadvantage. Yet the literature is contradictory. Using data from almost two thousand schools nationwide, Miksza (2013) found no relationship between free and reduced lunch rates or the percentage of minority students and principal satisfaction with school arts resources. As the study measured principal satisfaction, however, and not the actual budget allocation, it is possible that principals in such schools placed a reduced priority on the arts and were therefore satisfied with lower levels of resources.

Similarly, in a study of a single large urban district, Fermanich (2011) found no correlation between poverty rates or minority status and per-pupil spending on music education. The studied district, however, reported a comparatively low free and reduced lunch rate, with

only 25% of students eligible (Fermanich, 2011). Since DMIS serves schools with 50-100% free and reduced lunch rates (Disney Musicals in Schools, n.d.), these findings may not be applicable. Indeed, the majority of scholars suggest a link between community SES and available arts education funds, noting that schools and districts with more resources offer more opportunities in the arts (Catterall, 2012; Fredricks et al., 2002; McCarthy et al., 2004).

Yet the Miksza (2013) and Fermanich (2011) studies are not irrelevant to the POP. Fermanich (2011) found that 90% of a school's music education funding came from the district general fund, with the majority of the resources going toward specialist staff. Such budget structures do not allow much opportunity for purchases of performance rights or materials for production elements. Fermanich (2011) also found that school-generated special funds resulting from fundraising, ticket sales, and grant writing, supplemented core programming with enhancements like field trips and events. Schools in communities with more discretionary income, therefore, have more opportunity to generate such funds. These funds, while a smaller portion of a school's total budget, are essential. Fermanich (2011) noted that "a majority of music teachers and principals agreed they could not continue to offer the same quality of programs without these supplemental resources" (p. 147). Miksza's (2013) findings may also indicate that higher SES schools have an advantage. The researcher found that principals in schools in which arts specialists held leadership positions were more likely to be satisfied with their arts education resources. Since low SES schools are the least likely to have arts specialists on staff (Rabkin & Hedberg, 2011; Stringer, 2014), higher SES schools again gain an advantage.

School leaders and community members. The limited research on school leadership's influence on the arts suggests that principals can be an instrumental factor in the presence and sustainability of programs in the school microsystem. As Miksza's (2013) findings imply, having

arts advocates on school leadership teams may influence the allocation of resources to arts programs. Like teachers, principals, too, can become over-extended with the robust programming typical of school theater programs. In a study on school partnerships with community organizations—which is the model of the DMIS program—Hauseman, Pollock, and Wang (2017) found that two-thirds of responding principals stated such partnerships increased their workloads and left less time for important instructional leadership duties. Given the challenges and demands faced by principals in low SES schools, it is possible that they have less bandwidth to support such partnerships, which are a common model of theater education, as discussed later in this chapter.

Community involvement, another mesosystem factor, can contribute to the presence and sustainability of theater programs. Miksza (2013) found that principals' satisfaction with arts education resources is directly related to community and parent involvement in the arts. This likely advantages communities of caregivers who have the schedules and resources necessary to participate in arts education. Miksza (2013) further found that community demand for the arts predicts arts education opportunities in schools. Given the social reproduction of cultural capital discussed earlier, this favors higher SES communities.

Partnerships

Arts education in American schools, when available, is delivered by classroom teachers, arts specialists, arts organizations, or some combination of the three (Anderson & Risner, 2012; Dwyer, 2011; Remer, 2003). Arts organizations employ teaching artists to deliver instruction to students and professional development to educators (Anderson & Risner, 2012; Dwyer, 2011; Remer, 2003). Such arrangements are often initiated in the mesosystem, between school leadership and arts organization administrators, before being implemented in the microsystem

with teachers, teaching artists, and students. Stemming from the previously discussed tumultuous history of arts education, this patchwork approach to teaching the arts is unlike any other model in public education and brings with it complexities, challenges, and opportunities.

Arts organizations. Arts organizations, such as museums and theaters, are typically non-profit organizations with core missions to develop and promote art. Beginning in the early 1960s with the Lincoln Center for the Performing Arts, such organizations founded dedicated education departments (Remer, 2003). These early departments served many purposes that continue today, including providing visiting student groups with curriculum and programming, pushing into schools to deliver arts instruction, renewing future audiences by seeding cultural capital through school tickets and residency programs, appealing to donors through altruistic programs, generating revenue through pay-to-play programs, and cultivating the next generation of art makers (Baskin, 2017). Typically helmed by a director of education, such staffs range in size and receive varying budgets and priority within the arts organization (Russell, 2015). Herein lies another complexity in the arts education ecosystem. That such outside agencies provide core instruction in public schools is an anomaly in itself, but the varying size, quality, scope, and missions of these organizations layer in a host of factors that could influence the presence and sustainability of theater programs in low SES elementary schools.

One such factor is access to these organizations. In Los Angeles, Castaneda and Rowe (2006) found that theater was the most common arts discipline for which schools engaged such organizations, with 44% of schools in the studied grant program participating in a theater partnership. Since upwards of 90% of elementary schools offer some music instruction but only 4% offer theater (Parsad & Spiegelman, 2012), it is possible that schools may use such partnerships not to supplement their current arts programs, but to fill a gap in missing content

areas. The researchers found that many measures predicted a high volume of arts organization partnerships, including a school's academic performance, annual arts expenditure, and the number of fully certified teachers on staff (Castaneda & Rowe, 2006). Schools in neighborhoods with highly concentrated arts organizations were less likely to partner with organizations outside the local area (Castaneda & Rowe, 2006), suggesting that Vermeersch and Groenez's (2015) findings that proximity predicts an individual's participation in out-of-school experiences may also hold true at the institutional level. Since schools with higher academic performance (Barbarin & Aikens, 2015), higher arts expenditure (Catterall, 2012; Fredricks et al., 2002; McCarthy et al., 2004), and more certified teachers (Adamson & Darling-Hammond, 2012) typically serve higher SES communities, it is clear that access to arts organization partnerships is stratified by SES.

Access, however, is only one part of the equation. Within each partnering organization lie institutional factors that can make or break such partnerships. In a study of education departments within theater organizations, Russell (2015) identified five factors that influence the health and future stability of a theater's education department. These factors are (a) the department's founding story, (b) an effective education director who builds relationships within the organization and champions the department's work and staff, (c) the education director's appreciation of the department's role in fundraising, (d) the department's ability to generate earned income, and (e) the department's mention in strategic plans for the organization (Russell, 2015). Any one of these avenues, therefore, could manifest in ways that support or erode theater programming in schools.

Schools and arts organizations are institutions with differing goals and stakeholders. As such, the daily reality of schooling can conflict with that of art making, even at the partnership

level. El Sistema is a music education program that originated in Venezuela with a mission to enact social change for children in under-resourced communities (Simpson-Steele, 2017). In her study of an El Sistema program in a U.S. elementary school, Simpson-Steele (2017) determined that the structure and requirements of the program were at odds with those of the school. The author found that the program made small gains within each of the investigated guiding principles, but ultimately concluded that the U.S. public school environment was restrictive for programmatic goals, with its intensive time demands at odds with the competing priorities of students and schools (Simpson-Steele, 2017). This strain is not only evident for the teachers and students in such programs. As Hauseman et al. (2017) found, principals who take on such partnerships report increased workload and extended workdays, often to the detriment of their leadership duties. If one were to think of the relationship between schools and arts organizations exist using a Venn diagram, it may be important that the overlap includes deliberately aligned values and expectations.

Although schools can suffer problems stemming from misaligned partnership goals and expectations, arts organizations that operate programs in schools also feel the strain from factors at the school level. In a study of arts organization partnerships in Arizona, Amrein-Beardsley (2009) found that many implications of NCLB also impacted arts organizations working in schools. Participating organizations identified a decrease in funding and the impact of student test preparation as the biggest hurdles in offering programming (Amrein-Beardsley, 2009). If such external partnerships are the sole source of theater education, it is easy to see how redirected resources could entirely eliminate opportunity from a school. Yet the picture is not entirely bleak. When done well, quality arts education partnerships may be able to positively impact education policy at the local level. Colley (2008) studied a program that pairs teachers

with teaching artists to develop artistic pedagogical skills in non-arts teachers. Colley (2008) found the program led to (a) principals continuing to provide funding to offer the arts program annually, (b) participating schools hiring more arts specialists, (c) community leaders attending more public art events since the district's adoption of the program, and (d) adjacent districts' adoption of the program. Teaching artists, it seems, could be a critical link in these unique partnerships.

Teaching artists. Artists have engaged with schools since the beginning of formal public education (Booth, 2010). Rabkin (2012) noted that the settlement house movement at the turn of the last century, which aimed to integrate citizens across SES lines in hopes of spreading cultural capital, marks one of the first networks of teaching artists in America. Settlement houses were popular in England and the U.S. in the early 1900s, and they aimed to bridge the divide between classes by providing housing for middle class citizens in low income areas, who in turn provided services for the community (Rabkin, 2012). Settlement houses offered healthcare, childcare, and education aimed to relieve poverty among low income, predominantly immigrant communities (Greenwold, 2016). Serving tenement communities in large urban areas and largely operated by women, settlement houses quickly became a hotbed of arts creation and instruction (Greenwold, 2016). Given the mission of settlement houses, the early teaching artists moved beyond the skill-based instruction typical of conservatory training and embraced an arts-for-all ideology that guides the field today (Rabkin, 2012). When the NEA developed the arts in education program in the 1970s, the previously ad-hoc work of artists visiting and teaching in schools became formalized and fueled (Booth, 2010; Remer, 2003; Vasquez-Heilig et al., 2010). Around the same time, the Lincoln Center for the Performing Arts established the first education department of a major cultural institution, setting the template for hundreds of organizations across the country to

follow (Remer, 2003). To this day, these education departments employ teaching artists who work in school and community contexts offering a variety of services. This hybrid profession of artist-educator adds yet more complexity to the arts and theater education landscape, and its associated factors may contribute to the POP.

Despite more than a hundred years of development, teaching artistry is still a nascent field. Loose definitions of the term exist, and various groups have made attempts at professionalization over the years. There is much debate in the field regarding whether or not state or national certifications for teaching artists should exist (Booth, 2010), with a national survey of teaching artists roughly split on the matter (Anderson & Risner, 2012). Although some teaching artist specializations have begun to crop up in a few degree programs, no certification currently exists (Booth, 2010; Dwyer, 2011). There are, however, several professional organizations in the field, with the oldest being the Association of Teaching Artists. In the 1980s, the teaching artists at Lincoln Center organized and joined the United Federation of Teachers (Booth 2010; Remer, 2003), but this unionization has not spread. Other signs of professionalization include the 2003 launch of *Teaching Artist Journal,* the first peer-reviewed journal of its kind (Booth, 2010; Rabkin, 2011), and a since defunct national awards program (Booth, 2010).

This inconsistency in the field manifests in many ways. Although teaching artists can be found anywhere there are working artists, the profession is concentrated in urban areas that offer opportunities for artists to earn a living in their field. Partner organizations offering DMIS in their communities, for example, employ a network of approximately 220 teaching artists who earn income from their art and through their work as teaching artists (Disney Musicals in Schools, n.d.). In addition, the division employs a roster of twenty-five part-time teaching artists

for its self-managed programs in New York City. In 2014, Disney Theatrical Group was one of the first organizations to employ a full-time resident teaching artist, a trend that has begun to spread to some large performing arts centers. Yet, this is an anomaly. While a majority of teaching artists are employed by arts organizations, they are typically hired on contracts and lack adequate pay, health insurance, and consistent work (Anderson & Risner, 2012; Booth, 2010; Rabkin, 2012). Most teaching artists identify as both artists and educators, working a part-time, gig-based career in both identities (Anderson & Risner, 2012; Rabkin 2012). This patchwork career can lead to instability and inconsistency, which may impact the presence and sustainability of school theater programming.

Perhaps because of the nascence of the field, the lack of professionalization, and the typical employment structure (Anderson & Risner, 2012; Rabkin, 2012), teaching artists are not always well-trained for their assignments. Although certification would provide a baseline expectation of the skills and qualities of a teaching artist, Rabkin (2012) found in a national survey that principals and district leaders had no consequential opinion on the matter. Teaching artists themselves, however, along with administrators at the cultural organizations employing them, did indicate a desire to improve teaching skills (Rabkin, 2012). Anderson and Risner (2012) supported this sentiment, noting that a survey of 133 teaching artists revealed that a majority reported being unprepared for the work. Almost half of respondents reported being self-taught, and the majority of respondents reported feeling inadequately prepared early in their careers (Anderson & Risner, 2012). Despite a general sense of under-preparedness, teaching artists are a highly educated group, with almost 50% of the workforce holding a master's degree (Rabkin, 2012). It is clear, then, that arts degree programs may not provide the foundational pedagogical skills necessary for teaching artists to confidently begin their careers, employers do

not provide effective training, and teaching artists themselves have limited options for professional development due to restrictions of time and budget.

Indeed, the arts and education are two stand-alone fields. It follows, therefore, that practitioners working at the intersection of the two, but with formal training only in one, may find themselves between the norms and expectations of school and art, better equipped to navigate the latter, yet operating in the environment of the former. Herein lies another factor that could drive the POP. In an ethnographic study of artists teaching in schools, Hall, Thompson, and Russell (2007) employed Bernstein's pedagogic theory to explore the competence pedagogy (growth-based) and performance pedagogy (outcome-based) of teaching artists in a school. The authors found that the most successful artist pedagogies were performance-based, as they easily fit with a school culture favoring outcomes. Despite this finding, a majority of the artists noted favoring competency-based approaches, which became a source of tension in the work (Hall et al., 2007). Rabkin (2012) supported this finding and noted that most teaching artists find the process of the work more important than the product. The author suggested this process-based preference of teaching artists has roots in the settlement house movement, where artists taught students with a span of talent and interest and grew to appreciate the capacity of the arts to enrich every life (Rabkin, 2012). In a school culture in the aftermath of NCLB, however, assessment looms large and students, educators, and schools work in pursuit of targeted outcomes. It is no wonder, then, that this clash of cultures can lead to problems of collaboration, especially in programs like DMIS which pair teaching artists with teachers to create art within the context and culture of school.

Collaborations

Tensions between process and product are not the only source of strain impacting school arts programs. The curious-yet-lasting model of teaching artists, arts organizations, arts specialists, and generalist teachers delivering arts education in schools has led to a web of collaborations. The model itself has been a historical source of conflict in the field, with arts specialists concerned that arts organizations and teaching artists merely provide a stop-gap that could impact teachers' jobs and consistent instruction (Booth, 2010). Teaching artists, too, have at times felt discounted by educators, who may not appreciate the professional skills brought into schools (Booth, 2010). Remer (2010) calls on arts education stakeholders to embrace the "troika" (p. 88), suggesting that classroom teachers, arts specialists, and teaching artists each add value to a comprehensive arts education. In a way, Remer (2010) flips the problem on its head; rather than the mixed-bag of instruction and goals the model presents, it is possible it is instead an innovative approach to education. Seidel, Eppel, and Martiniello (2001) articulate this perspective, calling it a "model of education that transforms traditional structures of schooling" (p. 4).

Policies and structures of the exosystem, however, ultimately play out in the microsystem of classrooms and auditoriums. Many programs, including DMIS, attempt to bridge the gap between teachers, arts specialists, teaching artists, and cultural organizations by placing the stakeholders into programs with a common goal. In DMIS, for example, teaching artists employed by theater companies partner with teachers to create the school's first piece of musical theater (Disney Musicals in Schools, n.d.). This model shows promise. Kerin and Murphy (2015) found that non-arts teachers develop confidence and content knowledge when paired to co-teach the arts with an arts specialist.

Yet challenges in collaboration often arise in DMIS (Disney Musicals in Schools, n.d.), and the source may again have to do with a clash of cultures. Somech (2008) built on previous research on collaboration dynamics (Brass, 1981; Van der Vegt, Emans, & Van de Vliert, 2001; Van der Vegt, Van de Vliert, & Oosterhof, 2003) and determined that teacher teams with high task interdependence—that is, relying on team members for the ideas and support necessary to complete tasks—had more constructive styles of conflict management than those with low task interdependence. By both tradition and design, musical theater is an activity with high task interdependence. In DMIS, it is not uncommon to have upwards of five adults in the room, actively collaborating in a variety of ways. In contrast, although good teaching requires collaboration and careful group planning, generalist teachers are often autonomous during the regular school day.

Program Sustainability

Thus far, factors of cultural capital, education policy, resources (inclusive of funding and human resources), partnerships, and collaboration dynamics have each demonstrated complexities that contribute to the lack of theater programs in low SES elementary schools. These factors may also lead some schools to discontinue theater programs seeded by DMIS. Although this synthesis of literature has examined the details of the many factors contributing to the POP, it is equally as important to take them as a whole and understand how they influence the presence and sustainability of school theater programs. When considering holistic program sustainability, factors spanning the microsystem, mesosystem, macrosystem, and exosystem work in concert.

Although the literature on program sustainability is not comprehensive, one quality study identifies the factors of sustainability and presents frameworks for future research. In his 1981

study, Yin identified multiple events that influence the sustainability of programs, ranging from funding and budgets to training and institutional oversight. In a review of the literature on the topic, Scheirer (2005) found five recurring factors across the major studies reviewed, including (a) the capacity for the program to be adapted, (b) the presence of a program champion, (c) the program's alignment with the organization's mission, (d) the perception of benefits to stakeholders, and (e) the support of external stakeholders (p. 320). According to Yin (1981), a majority of events influencing sustainability manifest at the organizational level, pointing to the importance of both DMIS affiliate organizations and schools as environments in which the work must be sustained.

Responding to a need, Schell et al. (2013) developed a sustainability framework which is also the foundation of a survey instrument that evaluates program sustainability. The framework, developed from a comprehensive literature review, expert consultation, and concept mapping, identifies eight factors that influence the sustainability of programs (Schell et al. 2013). These factors include (a) environmental support, (b) funding stability, (c) partnerships, (d) organizational capacity, (e) program evaluation, (f) program adaptation, (g) communications, and (h) strategic planning (Schell et al., 2013). Table 1.1 provides Schell et al.'s (2013) operational definitions of these constructs along with their relevance to the DMIS program. As indicated in Table 1.1, Schell et al.'s (2013) sustainability framework provides a powerful tool for considering the POP within the DMIS context.

Table 1.1

Schell et al.'s (2013) construct definitions and their relevance to DMIS.

	Schell et al. (2013) operational definition	Relevance to DMIS
Environmental support	"Having a supportive internal and external climate for your program."	DMIS exists in environments ranging from schools, to arts organizations, to Disney Theatrical Group, and districts.
Funding stability	"Establishing a consistent financial base for your program."	At the organizational level, DMIS provides a seed grant of cash, goods, and services, which partner arts organizations eventually sustain. This is mirrored at the school level with seed gifts of goods and services.
Partnerships	"Cultivating connections between your program and its stakeholders."	DMIS pairs school teachers with teaching artists from partner arts organizations.
Organizational capacity	"Having the internal support and resources needed to effectively manage your program."	DMIS spans 17 and growing partner arts organizations, and over 200 schools, each with varying organizational capacities.
Program evaluation	"Assessing your program to inform planning and document results."	Stakeholders assess DMIS is different ways, ranging from student outcomes, to grant impact, to reach and scope.
Program adaptation	"Taking actions that adapt your program to ensure its ongoing effectiveness."	DMIS takes on an iterative model but has strict requirements for adherence to programming and brand guidelines.
Communication	"Strategic communication with stakeholders and the public about your program."	DMIS communications are both centralized (e.g. press) and decentralized (e.g. partner organization communications).
Strategic planning	"Using processes that guide your program's directions, goals, and strategies."	DMIS's strategic plan in both centralized (e.g. Disney's oversite and growth) and decentralized (e.g. partner organization and school level plans).

Note: Schell et al.'s (2013) definitions were retrieved from sustaintool.org, which hosts the instrument developed by the researchers. All DMIS information is Disney Theatrical Group administrative data (2018). The table positions Schell et al.'s (2013) conceptual framework and sustainability instrument as well suited for researching the constructs within DMIS.

Although the majority of research on program sustainability falls within the business or health literature, one publication identifies five elements central to the sustainability of arts education partnerships between organizations and schools. Seidel et al. (2001) conducted research to determine the factors influencing partnership sustainability within the complex ecosystem of arts education. The researchers' comprehensive methodology reviewed elements of sustainability across 21 arts education partnerships through more than 300 interviews, noting that student and school needs are at the center of sustained partnerships' missions (Seidel et al., 2001, p. xv). This clarity of mission requires that both parties are working toward the benefit of the school, suggesting that the vision of the arts organization's education department is instrumental, supporting Russell's (2015) findings on the importance of an effective education director. On the school level, this finding suggests that school theater programs may be more enduring if the school has a clear mission for the program. Scheirer (2005) corroborates this, citing the significance of mission alignment in program sustainability.

Seidel et al. (2001) next state that people who firmly believe in the impact of the arts champion successful partnerships (Seidel et al., 2001, p. xv). As Scheirer (2005) noted, previous research on program sustainability points to the significance of a "champion" in lasting programs (p. 339), further aligning this finding with the broader literature. Seidel et al.'s (2001) third finding suggests that sustained partnerships ensure many elements of programming receive care and oversight. These elements include relationships, values and goals, funding, and assessment.

Seidel et al.'s fourth finding (2001) is that sustained partnerships listen, adapt, and work to improve (p. xvi). Scheirer (2005) again substantiates this claim in her analysis, noting that the capacity for program modification is essential to sustainability. Finally, Seidel et al. (2001) state that sustained partnerships include a wide spectrum of stakeholders who are invested in the program (p. xvi). Scheirer (2005) again agrees, noting that both internal and external support are recurring factors that influence sustainability.

Gaps in the Literature

Despite this comprehensive review of the literature, there are gaps evident within this niche and under-researched field. Arts education in America has been on the defensive for over 50 years. Due to this pervasive need to justify the value of the arts, lines between advocacy and research can sometimes blur. There is a need, therefore, for more unbiased, credible arts education research.

The empirical evidence of the POP itself is lacking. Only two studies (Parsad & Spiegelman, 2012; Rabkin & Hedberg, 2011) investigate the presence of theater education in elementary schools, which, as previously noted, present somewhat ambiguous information. Furthermore, the validity of these studies may be complicated by the very model of arts education in America. Given the diluted approach to arts instruction, it is unclear what, precisely, schools and teachers are reporting as theater education within the literature. Finally, given this unique and complex model, more empirical research surrounding arts education partnerships would also improve the field. Program sustainability is under-researched in arts education, with Seidel et al. (2001) providing the only known valid and reliable study on the topic within the context of arts education partnerships. Since such partnerships are common and may be a student's only touchpoint to theater education, future research on this topic is essential.

Conclusion

A synthesis of the literature indicates that many complex factors contribute to the lack of theater programs in low SES elementary schools and the capacity of nascent programs to be sustained. Factors of cultural capital, education policy, societal perceptions of the arts, resources (inclusive of factors associated with teachers and principals), partnerships, organizational knowledge, and program sustainability all influence the presence and continuation of school theater programs for students who otherwise lack access.

While some factors, such as cultural capital and social reproduction, education policy, and societal perceptions of arts education, are outside the scope of a needs assessment study, others are actionable. The review of literature indicates that factors including staff preparation, support, funding sustainability, available resources, partnerships, collaboration dynamics, program adaptation, evaluation, communication, strategic planning, and local perceptions of theater education's value may influence the presence and sustainability of theater programs in low SES schools seeded by DMIS.

Schell et al. (2013) identified eight factors that influence program sustainability, which encompass many of the drivers investigated in this chapter. These factors include (a) environmental support, (b) funding sustainability, (c) partnerships, (d) organizational capacity, (e) program evaluation, (f) program adaptation, (g) communications, and (h) strategic planning (Schell et al., 2013). The authors' operational definitions of these factors are included in Table 1.1 (p. 53). Schell et al. (2013) developed the sustainability framework based on a comprehensive literature review, concept mapping, and expert consultations. The framework, which encompasses the aforementioned eight domains, serves as the foundation for the needs assessment study discussed in Chapter 2.

With its resources and reach, Disney may be positioned to improve access to quality arts education for students from low SES backgrounds, but only if the theater programs seeded by DMIS last. Of course, there are other programs that aim to restore the arts in schools, so findings on sustainability could be applied across many organizations working to address the POP. Such improvement could tilt the scales and bring equity to arts education, or even provide an advantage to students who do not gain the benefits of inherent privilege.

Chapter 2: School Sustainability in the Disney Musicals in Schools Program

This chapter presents the findings of a needs assessment that investigated the sustainability of theater programs seeded by DMIS. The chapter begins with an overview of the study's purpose; introduces the research questions, methods, and instrumentation; presents an analysis plan that guided the data collection and analysis; and concludes with an analysis of the data. Based on the driving factors of the POP evident in the literature (discussed in Chapter 1), this needs assessment empirically demonstrates the factors that contribute to schools' capacities to sustain their DMIS seeded theater programs.

Purpose of the Study

The purpose of this study was to identify the factors that influence a school's capacity to sustain its theater program after participating in DMIS. This data informed an intervention designed to improve program sustainability and, ultimately, ensure better access to theater education for students from low SES backgrounds.

Rationale and Implications

Although this needs assessment is confined to the DMIS program, its findings could potentially apply in the broader arts education field. Given the driving factors of the POP explored in Chapter 1, equitable access to quality theater education for low SES students becomes essential given the arts' standing as a uniquely human endeavor, necessary for parity, beneficial for cognitive and social-emotional development, and critical for the very future of the professional performing arts. As DMIS serves new communities every year and is a free program exclusively available to schools serving students from low SES backgrounds (Disney Musicals in Schools, n.d.), this needs assessment is essential to the continued quality and success of the program and central to understanding the POP.

The findings of this needs assessment may also be relevant to other fields. Afterschool program developers may find value in the factors influencing sustainability in school contexts. Scholars researching organizational knowledge and program sustainability may benefit from the needs assessment's unique model involving two organizational types (schools and arts organizations). As DMIS is offered through a multi-tiered grant, grant-makers, who are increasingly interested in funding programs that last, may also benefit from the needs assessment's findings. Most significantly, the needs assessment is positioned to identify factors of program sustainability in low SES schools. Accordingly, policy makers and practitioner-scholars could apply findings in environments that suffer inadequate budgets and staff attrition (Adamson & Darling-Hammond, 2012; Barbarin & Aikens, 2015).

Stakeholders

The units of analysis for this assessment are individuals within organizations. Two distinct organizational types exist within the DMIS ecosystem. The first type are schools, which apply to the DMIS program and, if selected, are awarded a grant of goods and services designed to seed new afterschool theater programs. The second type are partner arts organizations. These non-profit organizations are performing arts centers, regional theaters, or children's theaters that have received a grant of funds, training, intellectual property, and materials to implement DMIS in their communities.

At the school level, a team of three to five teachers elect to participate in DMIS, ultimately agreeing to learn foundational theater skills through a robust residency program. At the partner arts organizational level, an education department administers DMIS in the district and oversees a team of teaching artists who work in pairs to train teachers and establish theater programs in each school. Thus, three distinct stakeholder groups exist across the two types of

organizations. The stakeholder groups include teachers, teaching artists, and partner arts organization staff in education departments. The organization types are schools and partner arts organizations. Although there are countless other stakeholders involved in the DMIS program, ranging from students to parents and school leadership, the three aforementioned stakeholder groups are instrumental in the daily function and delivery of the program, and likely have the most influence on sustainability. This needs assessment also examined additional stakeholders—like principals who must approve the school's grant application—through discussions with these three primary groups. According to Yin (1981), a majority of events influencing sustainability manifest at the organizational level, pointing to the importance of both DMIS affiliate organizations and schools as environments in which the work must be sustained. Using a mixed-methods approach, this needs assessment aimed to identify the factors that support or inhibit program sustainability for these individuals within the context of their organizations.

Research Questions

To gather data about these factors from three stakeholder groups across two organizational types, the research question was:

- RQ1: What factors contribute to a school sustaining or discontinuing its theater program following participation in the DMIS residency?

The sub-question was:

- RQ1a: How, and to what extent, do the identified factors influence the sustainability of theater programs seeded by DMIS?

These questions required the investigation of multiple factors that contribute to the POP at the school and arts organization level. By researching how teachers, teaching artists, and arts organization staff experience barriers and opportunities for program sustainability, this needs

assessment study was designed to identify areas for improvement. Accordingly, the study aimed to empirically identify the problem's underlying factors and serves as an important first step in developing a research-backed intervention.

Method and Procedure

The needs assessment employed a sequential explanatory mixed methods design, in which the quantitative component was dominant. By first using a quantitative approach, a survey of the three stakeholder groups identified the factors influencing the sustainability of DMIS-seeded theater programs in low SES schools. After analyzing the survey data, follow-up focus groups helped to contextualize the findings by providing rich descriptions of the factors influencing sustainability across the organizations. Although the quantitative strand responds to the research question, both the quantitative and qualitative strands respond to the sub-question. By integrating quantitative and qualitative methods, the study was designed to identify the contributing factors, identify stakeholder perceptions of the factors, explain their manifestations, and provide the opportunity for additional drivers to surface (Lochmiller & Lester, 2018). Figure 2.1 presents the needs assessment's mixed-methods model. Lochmiller and Lester (2018) noted that such designs are driven by the quantitative component and completed in two phases. As the authors explained, mixed methods research is often an appropriate choice in educational contexts, in which problems of practice are multifaceted and do not always align to quantitative or qualitative approaches alone.

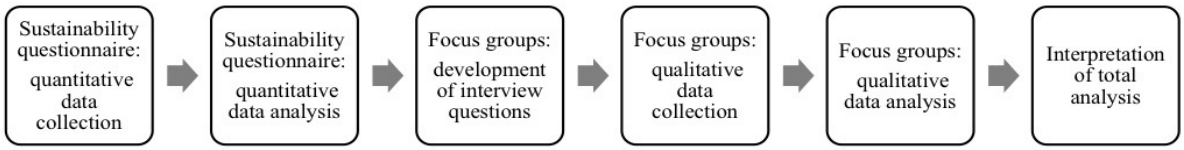

Figure 2.1: The needs assessment design. The needs assessment study employed a mixed-methods sequential explanatory design, in which the quantitative component informs the qualitative component.

Sample

Samples from three populations participated in the study. These previously discussed stakeholder groups are defined in Table 2.1.

Table 2.1

Samples for the Quantitative Phase of the Needs Assessment Study

Stakeholder Group	Description	Organization Type	Sample Size	Response Rate
Teachers	K-6 classroom teachers in low SES public schools who elect to join a team of three or more teachers in the DMIS program.	School	51	38%
Arts organization staff	Education directors, program managers, and other education department staff who oversee and administer the DMIS program in the local community.	Arts organization	6	100%
Teaching artists	Artist-educators who specialize in musical theater. Teaching artists conduct DMIS residencies designed to transfer theater making	Employed by arts organizations, but work in school environments	18	64%

Stakeholder Group	Description	Organization Type	Sample Size	Response Rate
	skills to the participating teachers in hopes of developing sustainable theater programs in the school.			

The participants worked in one of two DMIS programs of the twenty offered nationally at the time of the study. The first program, program A, is located in a large, Southern, urban center. The DMIS program is administered by a non-profit performing arts center with over $15,000,000 in revenue (GuideStar, n.d.). Public elementary schools serving a student population with a minimum free and reduced lunch rate of 50% are eligible to participate in the program (Disney Musicals in Schools, n.d.). Program A was chosen for the study because of its tenure in the DMIS program and its average sustainability rates. Within any participating district, individual schools can choose whether they stay within the DMIS program. As one of the first partners outside of Disney Theatrical Group's self-managed program in New York City, this organization has some of the most school continuation data available. Of the organization's seven years of experience operating DMIS (at the time of the needs assessment), the last five years have been self-funded by the partner organization (i.e., the organization is no longer operating under the initial capital grant from Disney). Program A's program sustainability rates rank in the middle across all programs nationally and are detailed in Table 3.

The second program, program B, is in a large, Midwestern, urban area. The DMIS program is administered by a non-profit performing arts complex with over $9,000,000 in revenue (GuideStar, n.d.). Public elementary schools with a student poverty level of 50% or higher (as determined by the state's department of education) are eligible to participate in the program. This program was chosen for the study because of its average tenure in the program

and its high early success rate. At the time of the needs assessment the program was concluding its third year, and the arts organization has been self-funding the program for one year. The dozen schools that participated in the program over the course of those three years have each continued producing a musical in the years following their initial participation in the residency. Although program B has been operating for less than half the time of program A, this 100% success rate indicates contributing factors worthy of investigation and is included in Table 2.2.

Table 2.2

School Sustainability Rates by Cohort Year

Program	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Program A	95%	88%	63%	33%	27%	44%	25%
Program B	100%	100%	100%	TBD	TBD	TBD	TBD

Note: Table 2.2 illustrates the percentage of schools that continue producing theater in the years following their initial participation in the DMIS program. Program A began programming in the 2012 school year, while program B began in the 2015 school year, explaining the varying amounts of data available for each program (Disney Musicals in Schools, n.d.). The needs assessment was conducted in 2018, when Program A was in its seventh year and Program B its third.

Across the three stakeholder groups, all individuals who participated in the DMIS programs A and B since inception were invited to participate in the study, regardless of whether their programs had been sustained at the school level or whether they had continued as teaching artists in the program. Although all but one of the responding teachers had continued the program, teaching artists and theater staff in program A had direct experience working in schools that had since discontinued their theater programs, and all stakeholder groups in both programs reported working with, or in, schools on the verge of discontinuation. Teachers from un-

sustained programs (with the exception of one individual) did not respond to the survey or participate in the focus group. While this is a limitation of the study, the mixed-method sequential design allowed data to surface surrounding perceived barriers or threats to future sustainability through the qualitative component. Although obtaining data directly from schools that have not sustained programming would have been valuable, the study is designed to provide the necessary data to understand the needs of schools and the program.

Because the participants were limited to DMIS programs in two cities and because participants were recruited according to stakeholder group, the study used purposive sampling. Purposive sampling is an approach in which participants are identified based on certain criteria (Lochmiller & Lester, 2018). Purposive sampling is a non-probability sampling method which can lead to biases and challenges of generalizability (Pettus-Davis, Grady, Cuddeback, & Scheyett, 2011). Given the specific context of DMIS and the applied nature of the POP, however, a sampling approach that maximized quality responses was paramount. While probability sampling would have ultimately yielded more generalizable results, further constraining a small sample size in the context of a specific program was not practical for the needs assessment and would likely have yielded fewer, lower quality responses (Lochmiller & Lester, 2018). Finally, the needs assessment complied with the policies of the governing institutional review boards, including the confirmation of informed consent, anonymity, and confidentiality. These matters are discussed in detail in the data collection section of this chapter.

Instrumentation

Because this study followed a mixed methods sequential design, two instruments were required for its implementation: a quantitative questionnaire to identify the factors influencing the sustainability of theater programs seeded by DMIS, and a focus group interview protocol to

further explore the findings of the questionnaire. Given the sequential approach, the first and foundational instrument was the questionnaire (Appendix A).

Questionnaire. To develop the questionnaire, it was important to identify factors from the literature most likely to influence the sustainability of theater programs in low SES schools. By limiting these factors to those most actionable within the DMIS context (that is, acknowledging that some factors, such as education policy, are outside of the scope of the study and its future intervention), I compiled a questionnaire from existing instruments to examine factors related to program sustainability, resources, collaboration dynamics, and perceptions of the value of theater education. To aid with the efficiency of the study and to strengthen external validity (Lochmiller & Lester, 2018), all three stakeholder groups received near identical copies of the instrument, with slight differences in language only to account for the participants' contexts (e.g., "school" vs. "arts organization"). The questionnaire begins with questions related to demographic information, including the participants' stakeholder group and DMIS program city.

The questionnaire comprises scales from four distinct instruments, with the dominant instrument being Schell et al.'s (2013) Program Sustainability Assessment Tool (PSAT). The PSAT measures eight factors that influence the sustainability of programs (Schell et al., 2013) and is used in its entirety, except for two questions that were eliminated for reasons to be discussed shortly. These factors, their operational definitions, and corresponding indicators are included in Table 2.3, below. Schell et al. (2013) developed the PSAT through a comprehensive literature review, concept mapping, and expert consultation. The original PSAT instrument has strong validity and reliability, with an average Cronbach's alpha of .88 (Luke, Calhoun, Robichaux, Elliott, & Moreland-Russell, 2014). Although Schell et al. (2013) provide a

comprehensive instrument for assessing program sustainability, other important constructs influencing a school's continuation of its theater program are not captured by the PSAT.

The PSAT is missing indicators of arts education resources and the perception of theater education's value. To investigate these factors, I identified additional instruments to supplement the PSAT tool. Since the POP examines the lack of theater programs in low SES schools, perceptions of arts education resources may influence the viability of nascent theater programs. The National Center for Education Statistics (NCES) (2009a) administered the Elementary School Arts Education Survey to principals, which included one indicator measuring respondents' perceptions of their access to arts education resources (e.g., funding, arts professional development for teachers, instructional time, materials, etc.). This indicator, which was the only measure of the construct on the original survey, was added to the questionnaire and is included in Table 2.3. Although the PSAT measures general environmental support and funding stability, the specificity provided in the satisfaction with school resources scale is informative for the POP.

Table 2.3

Factors Influencing DMIS Program Sustainability

Construct	Definition	Indicator	Citations
Environmental support	The extent to which internal and external environments support the program.	Five items from the PSAT instrument using a seven-point Likert-type scale with a NA option.	Schell et al., 2013
Funding stability	The extent to which funding is consistent and provides a stable base for the program.	Five items from the PSAT instrument using a seven-point Likert-type scale with a NA option	Schell et al., 2013

Construct	Definition	Indicator	Citations
Partnerships	The extent to which the program can develop connections to its stakeholders.	Five items from the PSAT instrument using a seven-point Likert-type scale with a NA option	Schell et al., 2013
Organizational capacity	The extent to which institutional support and resources lead to effective program management.	Five items from the PSAT instrument using a seven-point Likert-type scale with a NA option	Schell et al., 2013
Program evaluation	The extent to which the program assesses its work for planning and reporting purposes.	Five items from the PSAT instrument using a seven-point Likert-type scale with a NA option	Schell et al., 2013
Program adaptation	The extent to which actions are taken to maintain effectiveness.	Three items from the PSAT instrument using a seven-point Likert-type scale with a NA option	Schell et al., 2013
Communication	The extent to which communication with the public and stakeholders exists and is strategic.	Five items from the PSAT instrument using a seven-point Likert-type scale with a NA option	Schell et al., 2013
Strategic planning	The extent to which systems and processes are implemented to develop the program.	Five items from the PSAT instrument using a seven-point Likert-type scale with a NA option	Schell et al., 2013
School resources	The extent to which participants are satisfied with school resources to support the DMIS program. Resources include facilities, supplies, staff, time, arts professional development for	The extent to which participants are satisfied with school resources to support the DMIS program. Resources include facilities, supplies, staff, time, arts professional	NCES, 2009a

Construct	Definition	Indicator	Citations
	teachers, community support, student interest, and funding.	development for teachers, community support, student interest, and funding.	
Value of theater education	The extent to which participants value theater education in schools.	A sub-scale featuring three items from the NCES (2009a) instrument on arts education. The sub-scales use a seven-point Likert-type scale with a NA option.	NCES, 2009b
Task interdependence	The extent to which team members rely on each other to complete their work	A three item sub-scale using a seven-point Likert-type scale with a NA option	Van der Vegt et al., 2003
Preparedness	The extent to which participants feel prepared to succeed in the DMIS program.	Two original items using a seven-point Likert-type scale with a NA option.	Disney Theatrical Group Administrative data, 2018

Note: Table 2.3 identifies constructs assessed in the needs assessment questionnaire, provides their operational definitions, discusses their indicators and scales, and includes citations to supporting literature.

A second survey conducted by NCES (2009b) evaluated classroom teachers' experiences with arts education. The Arts Survey of Elementary School Classroom Teachers (NCES, 2009b), includes an indicator of teachers' perceptions of the value of arts education. This is the sole indicator of the construct on the original instrument and is included in Table 2.3. This indicator supplements the PSAT and further specifies the needs assessment questionnaire. Although there is no available reliability information for the NCES surveys (2009a, 2009b), they are frequently

cited within the field (Miksza, 2013; Parsad & Spiegelman, 2012; Sparks, Zhang, Bahr, & Ralph, 2015).

Since theater is a highly collaborative art, measuring collaboration was also important. Van der Vegt, Van de Vliert, and Oosterhof (2003) developed a three-question scale to assess task interdependence within teams. Task interdependence is the degree to which members of a team rely on each other for support and information to carry out their duties (Somech, 2008). Since DMIS requires teachers to work together in teams toward a common creative goal, challenges with task interdependence can often arise. Teams with high task interdependence rely on group support—like the sharing of ideas and resources—to complete tasks. Teams with low task interdependence, on the other hand, operate with more autonomy (Somech, 2008). By both tradition and design, musical theater is an activity with high task interdependence. In a school rehearsal setting, many teachers actively collaborate throughout the process. The questionnaire includes the entirety of the task interdependence scale created by Van der Vegt, Van de Vliert, and Oosterhof (2003). This scale has a Cronbach's alpha of .70 and is included in Table 2.3.

The final indicator for the needs assessment questionnaire focuses on preparedness. Teaching artists often feel unprepared for their work (Anderson & Risner, 2012; Rabkin, 2012), arts organization staff report learning on the job, and DMIS teachers report under-preparedness as a concern heading into their second and third years of the program (Disney Musicals in Schools, n.d.). Although Anderson and Risner (2012) developed an instrument including measures of teaching artist preparedness, the authors reported validity problems with the survey and did not recommend its use in the needs assessment. Rabkin (2011) developed a pilot-tested instrument including measures on preparedness, but the indicators were limiting in their wording and narrowed participants to teaching artists only. Accordingly, I added two original questions to

the needs assessment questionnaire to evaluate perceptions of preparedness across all three groups. The second question was written negatively, allowing for reverse coding in the analysis to further strengthen the reliability of this measure.

As discussed, the eight factors at the center of the PSAT were the foundation for the needs assessment (Figure 2.1, p. 61). The additional sub-scales added to the instrument, therefore, were deliberately selected to provide more specific data on drivers of the POP, but still remain within the established framework. Although these additional sub-scales are outside of Schell et al.'s (2013) original instrumentation, they were selected due to their alignment with the PSAT domains (as detailed in Table 2.4), and capacity to gather data more specific to school arts programs.

Table 2.4

The Alignment of the Supplementary Sub-Scales with Schell et al. (2013)

Schell et al., (2013) constructs	Preparedness (Original items)	Satisfaction with school level resources (NCES, 2009a)	Task interdependence (Van der Vegt et al., 2003)	Perception of the value of theater education (NCES, 2009b)
Environmental support		X	X	X
Funding stability		X		X
Partnerships			X	X
Organizational capacity	X			
Program evaluation				
Program adaptation				
Communications			X	

Schell et al., (2013) constructs	Preparedness (Original items)	Satisfaction with school level resources (NCES, 2009a)	Task interdependence (Van der Vegt et al., 2003)	Perception of the value of theater education (NCES, 2009b)
Strategic planning	X	X		X

Note: This table illustrates how the original items on preparedness, the questions from the National Center for Education Statistics (NCES, 2009a, 2009b), and the Ven der Vegt et al. (2003) sub-scales align with the PSAT tool (Schell et al., 2013).

Finally, as the PSAT (Schell et al., 2013) is the foundation for the instrument, it was important to align tense, voice, and word choice in the NCES (2009a, 2009b), Van der Vegt et al. (2003), and original subscales to match. Where Likert-type scales are used, all have been adjusted to match Schell et al.'s (2013) seven-point scale for consistency, moving the supplemental scales from five points to seven points. Dawes (2008) found that data collected from five and seven-point scales yielded equivalent results, upholding the integrity of the additional scales while providing consistency across the whole instrument. Given the compilation of the questionnaire and the inclusion of an original indicator, I conducted cognitive interviews to assess and improve the validity of the instrument.

Cognitive interviews. Cognitive interviews are a tool for improving validity in survey design (DeSimone & Le Floch, 2004). By asking prospective respondents to think aloud as they encounter the questions, cognitive interviews allow the researcher to fine tune the instrument and ensure it is measuring what it intends to measure. Since the needs assessment questionnaire includes questions from four different instruments and original items, cognitive interviews were useful for preserving and strengthening validity. I conducted three cognitive interviews with Disney Theatrical Group's education department staff, two of whom are teaching artists, and one

of whom is a program manager and former classroom teacher. These interviewees, all well versed in the program and knowledgeable about the three stakeholder groups, provided useful insights for improving the needs assessment instrument.

The original PSAT references "the program" throughout the instrument (Schell et al., 2013). Since participants are likely to encounter many programs in their work, adjusting this language to "the Disney Musicals in Schools program" was done to strengthen validity. During cognitive interviews, however, two participants noted that DMIS exists in multiple contexts. Accordingly, participants may confuse the phrase "*the* Disney Musicals in Schools program" and respond with their thoughts on the national DMIS enterprise. Since the needs assessment aims to understand factors of sustainability in the school and arts organization levels, the language was adjusted to read "*your* Disney Musicals in Schools program" throughout. Cognitive interviewees agreed that this slight adjustment grounded the inquiry at the school and organizational level.

Similarly, all three cognitive interviewees flagged the word "organization" (Schell et al., 2013) as confusing for teachers. Although arts organization staff and teaching artists may correctly assume "organization" refers to the partner theater, teachers may wonder if the term refers to their school or to the partner theater. Since the study aimed to understand factors influencing sustainability in both schools and arts organizations, it was important teachers respond within the context of their schools. Accordingly, logic features in the survey software were used to ensure teachers saw the word "school" and other respondents saw the word "organization" in the relevant sub-scales.

Two out of three cognitive interviews revealed the word "state" in one question was confusing. Interviewees wondered if the question required knowledge of state budget allocations and were unsure how to respond. By removing the word "state," interviewees more clearly

understood the prompt and were able to provide a quality answer. The NCES sub-scale measuring satisfaction with resources was adjusted from general "arts instruction" (2009a) to "Disney Musicals in Schools" for clarity and to improve validity. Logic functionality in the survey software was again employed to adjust the language from "in this school" to "in participating schools" for respondents who identify as a teaching artist or arts organization staff. Since DMIS does not use musical instruments, cognitive interviews also revealed that the mention of instruments in the question was confusing, and the phrase was deleted from the response options.

The cognitive interviews led to the removal of two questions from the PSAT program adaptation sub-scale. The PSAT, originally developed for public health programs, incorporates language outside the field of arts education. Accordingly, two cognitive interviewees noted that the prompt, "the program periodically reviews the evidence base" was confusing (Schell et al., 2013). Similarly, the meaning of item "the program adapts to new science" was unclear to the participants (Schell et al., 2013). Both items were removed from the final instrument since the questions compromised validity. Next, the phrase "the issue" was changed to "theater education" when all three interviewees reported confusion on intention. Finally, in the survey's last question, the phrase "the arts" was adjusted to "theater" to better specify intent. Each of these changes were intended to improve the validity and cohesion of the instrument.

Focus group interview protocol. The qualitative strand of the mixed methods sequential design followed the quantitative strand and was designed to explain the findings from the questionnaire. As the sub-research question asked how the factors identified by the survey influence the sustainability of DMIS seeded theater programs, the qualitative strand responds to the sub-research question while providing an opportunity for additional factors to surface, thus

also responding to the research question. After collecting and analyzing the data from the needs assessment questionnaire, I assembled three focus groups comprised of the stakeholder groups. The focus group protocols (Appendix B) followed a semi-structured approach, the direction of which was informed by the results of the questionnaire. A semi-structured approach provided consistency across the three stakeholder groups while allowing the flexibility necessary to ask additional questions and follow the direction of the discussion (Lochmiller & Lester, 2017).

Although the preceding quantitative strand ultimately informed the questions asked in all focus groups, ensuring the qualitative strand was rooted in the literature also bolstered the study's rigor (Bolderston, 2012). Seidel et al. (2001) of Harvard's Project Zero conducted the only study examining the sustainability of arts organization and school partnerships. As examined in Chapter 1, the authors identified five elements central to the sustainability of such partnerships. Seidel et al.'s (2001) findings align well with Schell et al.'s (2013) constructs, which form the basis of the PSAT. Table 2.5 summarizes Seidel et al.'s (2001) findings and demonstrates alignment with Schell et al.'s (2013) framework, suggesting that the core components of program sustainability transcend disciplines and organizational structures. Thus, the broader literature on program sustainability is upheld within the unique context of school arts programs.

Table 2.5

The Alignment of Seidel et al. (2001) with Schell et al. (2013).

Seidel et al. (2001) Finding	PSAT (Schell et al., 2013) Alignment
Finding 1: Student and school needs are at the center of sustained partnerships' missions. (Seidel et al., 2001, p. xv).	Partnerships Strategic planning

Seidel et al. (2001) Finding	PSAT (Schell et al., 2013) Alignment
Finding 2: People who firmly believe in the impact of the arts champion sustained partnerships (Seidel et al., 2001, p. xv).	Environmental support Organizational capacity Partnerships
Finding 3: In sustained partnerships, many facets of the work are attended to. These include relationships, values and goals, funding, quality control, and assessment (Seidel et al., 2001, p. xvi).	Environmental support Funding stability Partnerships Organizational capacity Program evaluation
Finding 4: Sustained partnerships listen, adapt, and improve (Seidel et al., 2001, p. xvi).	Partnerships Organizational capacity Program adaptation Communications
Finding 5: Sustained partnerships include a wide spectrum of stakeholders who are invested in the program (Seidel et al., 2001, p. xvi).	Environmental support Partnerships Organizational capacity Communications Strategic planning

In addition to being aligned to the PSAT framework, Seidel et al. (2001) provide a series of reflection tools aimed at understanding the sustainability of school and arts organization partnerships. Since these instruments explore many of the constructs assessed in the questionnaire, they were a valuable starting place when developing interview questions for the focus groups. Just as Schell et al. (2013) ground the quantitative component in empirical literature, Seidel et al. (2001) provide research-backed qualitative tools unique to the niche topic and designed to provide rich, explanatory data. Given the alignment of Seidel et al. (2001) with Schell et al. (2013), both strands of the study are rooted in of Schell et al.'s conceptual framework.

In order to develop explanatory focus group questions, the quantitative data were first analyzed. Schell et al. (2013), who developed the PSAT tool, provide instructions for calculating

the mean of each of the survey's subscales. The lowest means are the areas most likely to improve sustainability if addressed (Schell et al., 2013). After collecting data from the questionnaire, the results were analyzed and the factors most likely to impede the sustainability of DMIS seeded theater programs were identified. The Sidel et al. (2001) reflection instruments were then cross referenced, and questions associated with the findings were developed using Sidel et al.'s (2000) instrumentation as a starting place. Since the qualitative component of the study was intended to expand and explain the findings from the quantitative strand, additional questions were developed based on the survey's findings to provide more context on the nature of sustainability in the DMIS program. The focus group interview protocols can be found in Appendix B.

Data Collection

Recruitment. When recruiting participants, it is important to consider power dynamics to mitigate pressure on prospective participants and to limit bias. Power dynamics exist in all organizations, and the DMIS program is no different. Given the three stakeholder groups at the center of the needs assessment, however, different dynamics unique to each subsample required different recruitment approaches. Prospective participants received an email according to stakeholder group inviting them to participate in the study (i.e., one email for teachers, another for arts organization staff, and a third for teaching artists). The sender, however, could influence individuals' decisions to participate. Since the two DMIS programs at the center of the study are responsible for its implementation in their respective cities, I emailed the teaching artists and teachers directly to avoid employer-employee, or grant maker-grantee, dynamics between the groups. With the arts organization staff, however, the power dynamics shift. Since Disney Theatrical Group is the grant maker to the arts organizations, and since I created the DMIS

program and lead the division's education department, there were inherent power dynamics in play when recruiting arts organization staff for the study. Accordingly, the email sent to arts organization staff came from a member of the Disney Theatrical Group education department with limited involvement in the DMIS program. Although no recruitment strategy is without limitations, these steps helped ensure that individuals did not feel obligated to participate. Lochmiller and Lester (2018) note the imperative nature of ethical considerations, including such power dynamics, when conducting educational research.

Quantitative data collection. Regardless of the point of origin, the emails each included information on the study, its goals, its voluntary nature, and required time commitments, and they also provided a link to the DMIS program sustainability questionnaire. Sample emails are included in Appendix C. The questionnaire utilized Qualtrics, online survey software. Upon initiating the questionnaire, participants were prompted to review a description of the study, its benefits and known risks, and the voluntary nature of participation before digitally indicating their consent. All participants provided informed consent as required by the policies of the governing institutional review boards. Individuals could decline participation or opt out of the study at any time without consequence. The 50-item instrument took approximately ten minutes to complete, fitting the parameters of the institutional review board and minimizing the burden on respondents. Participation was anonymous, and all data collected remains confidential and non-identifying.

Qualitative data collection. The quantitative strand of the needs assessment (i.e., the questionnaire) was completed and analyzed before the qualitative strand (i.e., the focus groups) was conducted. A second email mirroring the aforementioned deployment strategy was sent to the three stakeholder groups inviting their participation in the focus groups. Individuals indicated

their interest in participating in focus groups by responding to the email. Each focus group consisted of three to six participants and was limited to members of the same sub-sample (i.e., a teaching artist focus group, a teacher focus group, and an arts organization staff focus group). By not comingling the subsamples, participants were likely freer to discuss challenges involving the other groups (Lochmiller & Lester, 2018).

Before participating in the focus groups, participants reviewed and completed informed consent forms, which reviewed the purpose of the study and its voluntary nature and provided consent for participation in the study. Each focus group lasted no longer than one hour and was conducted over video conference. Using a semi-structured protocol informed by the findings of the questionnaire and inspired in part by the instruments developed by Seidel et al. (2001), the discussions featured open-ended questions designed to explain and contextualize the quantitative results (Appendix B). The focus groups were audio recorded and transcribed, and I took notes on responses and behavior throughout. Participants member-checked a draft of the analysis, and one participant provided clarifying feedback which was incorporated in to the final analysis.

Analysis Plan

Given the multifaceted nature of the POP, the three distinct stakeholder groups in the study, the two cities represented in the research, and the two different organizational types at which stakeholders work, a focused analysis plan was essential. With the sequential mixed-methods design, it was important to develop an analysis plan methodologically appropriate for both the quantitative and qualitative components yet integrated in its presentation of holistic findings (Figure 2.1, p. 61). For these reasons, it was also essential that the analysis plan organized the data to answer both the research question and sub-question. Therefore, a clear plan to analyze the quantitative data, develop the qualitative strand in response, analyze the

qualitative data, and integrate data from both strands into a total analysis upheld the study's sequential explanatory design. Table 2.6 summarizes how the data was analyzed to answer the research question and sub-question.

Table 2.6

A Summary of the Analysis Plan to Answer the Research Question and Sub-Question

Question	Data Source	Analysis Plan
Research question: What factors contribute to a school sustaining or discontinuing its theater program following participation in the DMIS residency?	Questionnaire	Descriptive statistics
Sub-research question: How, and to what extent, do the identified factors influence the sustainability of theater programs seeded by DMIS?	Questionnaire	Inferential statistics
	Focus groups	A priori and emergent coding

Quantitative Analysis Plan

To analyze the quantitative data, I verified and improved the reliability of the survey instrument before running the appropriate statistical tests. After collecting data, the subscales were tested for reliability. Although, overall, the instrument had strong internal consistency, a few low Cronbach's alphas revealed weak elements of the questionnaire. The value of theater education scale was consistently weak across the full sample and all three subsamples, with a total Cronbach's alpha of .352. After evaluating Cronbach's alphas for each item on the scale, it was concluded that the entire scale was weak, and I therefore eliminated it from the results. Since publications on the original instrument did not include reliability information, it is possible that the original scale had low reliability. Similarly, an initial analysis of the collaboration scale yielded a negative covariation between items, with a Cronbach's alpha of -.421. After removing

the first item from the scale, however, internal consistency improved dramatically to a Cronbach's alpha of .81. As a result, the first item was eliminated from the results to improve reliability. With the removed scale and removed item, the instrument had excellent internal consistency with Cronbach's alphas ranging from .77 to .97, with an average Cronbach's alpha of .89, compared to an average Cronbach's alpha of .64 before the removal of the aforementioned items.

After verifying the reliability of the data, descriptive statistics were used to analyze the findings. Descriptive statistics allow the researcher to describe the findings of the data and present their values (Lochmiller & Lester, 2017). Schell et al. (2013) note that the means of the PSAT subscales should be calculated with the lowest means prioritized for opportunities to improve program sustainability. Accordingly, means were calculated for each of the subscales to determine which factors presented the biggest opportunities for improvement. Kruskal Wallis and Mann Whitney U tests were also used to determine statistical significance of differences between stakeholder groups and program cities, respectively. Because the subsamples of the three stakeholder groups were different, and because the data was not normally distributed, these nonparametric tests were the appropriate choice (Lochmiller & Lester, 2017). Given the sample size of the needs assessment, which was not large enough to support correlational statistical analysis, descriptive and inferential statistics were an appropriate choice for understanding which of the various factors influenced the sustainability of theater programs across three stakeholder groups in two cities. Lochmiller and Lester (2017) noted that descriptive statistics are well-suited to smaller sample sizes. Focus group interviews were next developed to explain and expand upon the quantitative data.

Qualitative Analysis Plan

Three separate focus groups were arranged to discuss the findings of the questionnaire so as to more broadly understand factors contributing to the continuation or discontinuation of theater programs seeded by DMIS. The teachers' focus group comprised four participants, two each from program A and program B. All participants were women who had been teaching at their current schools for several years. Three of the participants were music teachers and one was a 4th and 5th grade math teacher. The participants had various years of experience in the DMIS program, ranging from one to seven years.

The teaching artist focus group comprised three participants. One participant was a current teaching artist in program A, one was a former teaching artist in program A, and the third was a current teaching artist in program B. Both active teaching artists had been with the program since its inception in their cities, and they had worked in seven and three schools, respectively. The former teaching artist from program A had worked in the program for its first four years and had thus worked in four schools before transitioning to another career. Two of the participants were women, and one was a man.

The arts organization staff focus group comprised six participants and, given this subsample's small numbers (N=6), included 100% of all survey respondents from the subsample. The participants were evenly split between program A and program B, and all but one participant was a woman. The titles held by the participants include executive vice president for education and outreach, vice president of education and community engagement, senior director of education and outreach, director of education and community engagement, education programs manager, and education coordinator. From the audio recordings of the focus groups, verbatim transcripts were created. After completing the transcripts, the data was coded.

Coding. As the mixed methods design features an integrated approach to data collection and analysis, it was critical that the quantitative component informed the analysis of the qualitative strand. Accordingly, Schell et al.'s (2013) conceptual framework (Figure 2.1, p. 61) served as the basis for *a priori* codes. According to Lochmiller and Lester (2017), *a priori* codes are predetermined codes based on research-backed theoretical or conceptual frameworks. Such codes require the researcher to be well informed about the literature in order to make accurate coding determinations. Methodologically, *a priori* coding was a sound choice. Given the sequential explanatory design, the quantitative analysis was completed before developing the qualitative methods and instrumentation. Mixed methods researchers analyze the quantitative and qualitative data independently before integrating and interpreting the total results (Creswell & Plano-Clark, 2011). The sequential mixed methods design of the assessment required the integration of the quantitative and qualitative strands, with the latter intended to explain the results of the former. Accordingly, linking the two methods with a research-backed conceptual framework allowed for quality analysis. Further, the Seidel et al. (2001) reflection instruments informed the focus group questions and are aligned with the PSAT framework (Table 2.5, p. 74). As a result, the data from the focus groups lent itself well to the eight *a priori* codes established in the framework (Figure 2.1, p. 61).

Although the *a priori* codes aligned the analysis to the framework and research questions, emergent coding was also utilized to capture relevant ideas outside the framework or between its categories. Lochmiller and Lester (2018) noted that emergent codes can be descriptive in nature, allowing the researcher to identify patterns in the data. After coding the data, I identified categories. These categories compared and combined the coded findings into categories of similar data (Lochmiller & Lester, 2017). After identifying and holistically considering the

categories, themes emerged. These themes provided a broad-strokes interpretation of the data and combined the categories according to patterns (Lochmiller & Lester, 2017). The analysis reviews these findings by theme, within the factors established by the quantitative strand.

Analysis

The preceding analysis plan required the analysis of the quantitative data, the development of the qualitative focus group protocols, the analysis of the qualitative data, and the combined interpretation of the results. In this section, I present the findings of each strand of the needs assessment before integrating the results for a total analysis.

Quantitative Findings

As the samples span three stakeholder groups across two program cities, the quantitative data were first analyzed in total before being analyzed by stakeholder group and location. Although the responses of the total sample were important for understanding the data, to fully appreciate the nature of program sustainability it was equally important to understand differences between stakeholders and programs. This section presents the quantitative results of the full sample, followed by stakeholder group and program location.

Full sample. Teachers, teaching artists, and theater staff all participated in the questionnaire. As the largest stakeholder group involved in the program (with the exception of students, who did not participate in the study), the majority of the 75 questionnaire respondents were teachers (68%), followed by teaching artists (24%), and arts organization staff (8%). Figure 2.2 illustrates the breakdown of questionnaire respondents according to stakeholder group. Figure 2.3 shows the breakdown of respondents by city. Program A, which had been operating the program for seven years at the time of the needs assessment, represented 67% of respondents,

with the remaining 33% associated with program B, which had been operating the program for three years and is consequently smaller given the cohort model of the program.

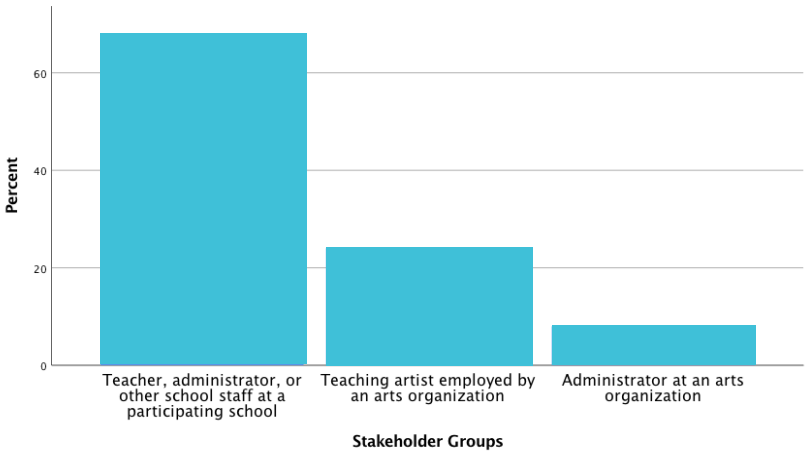

Figure 2.2: Percentage of respondents according to role in the DMIS program.

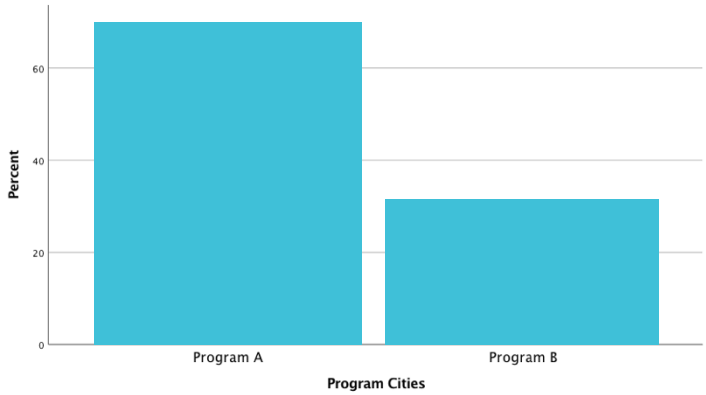

Figure 2.3: Percentage of respondents according to program city.

Table 2.7 indicates the full sample means for each of the questionnaire subscales. The questionnaire revealed several areas of need within the DMIS program. According to Schell et al. (2013), factors with lower average scores indicate areas for improvement. From the 12 factors investigated via the questionnaire, four stood out as areas for potential improvement. The

respondents indicated that partnerships, funding stability, satisfaction with school resources, and strategic planning were all areas worthy of further investigation. Partnerships were the factor identified as the biggest area for improvement by the full sample, followed by funding stability, satisfaction with school level resources, and strategic planning, respectively. Table 2.7 ranks these factors according to the full sample response, beginning with the factors in most need of attention and ending with strengths.

Table 2.7

Full Sample Subscale Means, from Lowest to Highest

Factor	Min.	Max.	Mean	Standard Deviation
Partnerships	5	35	4.07	9.17
Funding stability	5	35	4.59	7.47
Satisfaction with school resources	15	56	4.66	9.61
Strategic planning	7	35	4.76	7.38
Program evaluation	8	35	4.91	6.77
Communication	12	35	5.04	7.07
Organizational capacity	6	35	5.17	7.97
Environmental support	11	35	5.66	6.59
Program adaptation	9	21	5.93	3.07
Preparedness	7	14	6.12	2.19
Collaboration	8	14	6.43	1.77

The satisfaction with school resources subscale measured several items. Of particular note, the item with the lowest full sample mean on the subscale was arts professional

development for teachers (M= 3.71). The full sample reported collaboration, preparedness, and program adaptation as strengths of their DMIS programs, with program evaluation, communication, organizational capacity, and environmental support in the middle of the pack.

Teachers. Since DMIS is ultimately sustained by teachers, understanding teachers' intentions to continue the program was foundational. Additionally, as the largest stakeholder group and most influential in program continuation, the factors influencing sustainability identified by teachers respond to the research question. As previously noted, the majority of teachers indicated they would likely continue their musical theater program in the coming year. Although teachers from discontinued programs did not respond to the questionnaire (with one exception), the respondents did indicate some degree of hesitation when asked about continuation. Of responding teachers, 56.9% selected "definitely yes" when asked if they would consider offering DMIS the following year, with 11.8% selecting "probably yes," and 9.8% selecting "might or might not." After accounting for the one respondent who indicated they would not continue offering the program, the remaining 19.6% of teachers did not answer the question, which could itself indicate uncertainty.

Although they were the biggest sample, there was some variation on the subscales between the teacher group and that of the full sample. Whereas the full sample identified partnerships, funding stability, satisfaction with school resources, and strategic planning as the areas in most need of attention, the teacher sample resulted in a different ranking with partnerships, funding stability, strategic planning, and satisfaction with school resources as the lowest scoring factors (in that order). Table 2.8 includes the teacher sample means for each subscale of the questionnaire.

Table 2.8

Teacher Sample Subscale Means, from Lowest to Highest

Factor	Min.	Max.	Mean	Standard Deviation
Partnerships	5	35	3.71	9.59
Funding stability	5	35	4.23	7.44
Strategic planning	7	35	4.58	7.41
Satisfaction with school resources	15	51	4.67	9.44
Program evaluation	8	35	4.71	7.17
Organizational capacity	6	35	4.73	8.06
Communication	12	35	4.82	7.49
Environmental support	11	35	5.41	7.22
Program adaptation	9	21	5.83	3.40
Preparedness	7	14	5.86	2.30
Collaboration	8	14	6.34	2.02

Mirroring the full sample, the teacher group also had the lowest mean for the arts professional development for teachers item within the satisfaction with resources subscale (M= 3.69). Across the board, the teachers provided the lowest scores of the three groups, indicating that the program faces the most challenges at the school level.

Teaching artists. Teaching artists in the DMIS program bring a unique perspective to the research question. As professional artists working in school contexts, teaching artists understand the creative needs of theater production while experiencing the opportunities and limitations of schools. Theses stakeholders, therefore, provide valuable insight on the research questions. The

teaching artist group scored the subscales higher than the teachers group but lower than the theater staff group. Teaching artists identified satisfaction with school resources, partnerships, and funding stability as the areas most in need of improvement. Just as the teachers did, the teaching artists also ranked arts professional development for teachers as the lowest item within the satisfaction with resources subscale (M= 3.36). Table 2.9 includes the teaching artist sample means for each subscale of the questionnaire. Interestingly, although teaching artists and theater staff (as will be discussed shortly) ranked school level resources as the lowest of the subscales, the teacher sample—who work directly with such resources at the school—scored other factors lower.

Table 2.9

Teaching Artist Sample Subscale Means, from Lowest to Highest

Factor	Min.	Max.	Mean	Standard Deviation
Satisfaction with school resources	19	52	4.36	9.88
Partnerships	21	30	5.03	3.24
Funding stability	25	29	5.28	1.95
Strategic planning	20	35	5.40	7.55
Program evaluation	24	32	5.87	4.62
Communication	27	33	6.00	2.45
Environmental support	24	35	6.05	3.72
Program adaptation	12	21	6.23	2.46
Organizational capacity	26	35	6.45	3.35
Collaboration	11	14	6.54	1.22
Preparedness	8	14	6.59	1.75

Arts organization staff. Removed from the in-school rehearsal experience, arts organization staff experience DMIS from an administrative point of view, thus offering a varied perspective that responds to the research question. Of the three groups, arts organization staff reported the most confidence across the questionnaire's subscales, with higher means reported for all factors. It is interesting to note that the further a group is from the daily work in schools, the more positive their responses to the subscales were. Although the participants responded to the questionnaire within the context of their own organizations, the DMIS program is ultimately in service of students and teachers regardless of stakeholder group. These differences in response could provide insight into barriers for program sustainability at the school level.

As the smallest sample (N=6), the arts organization staff group reported slightly different areas of need than the other groups, though there was some overlap. Table 2.10 includes the arts organization staff sample means for each subscale of the questionnaire. The arts organization staff identified partnerships, satisfaction with school resources, program evaluation, and communication as the biggest need. Just like the other two subsamples, the arts organization staff also identified arts professional development for teachers as the lowest item within the satisfaction with school resources subscale (M= 4.5). It is evident, then, that all three stakeholder groups identify arts professional learning for teachers as a program need. Program evaluation and communications were two factors of relative priority for the arts organization staff. Although teaching artists ranked these factors slightly higher than the arts organization staff group, teachers ranked them lower. Nevertheless, program evaluation and communication fell in the bottom four factors for the arts organization staff, indicating that they are an area of priority for this stakeholder group. Given the need for arts organizations to conduct quality assessments for funding and programmatic improvement, and given the consistent communication necessary to

implement DMIS (ranging from teaching artist scheduling, to school emails, to securing publicity and marketing), these factors are worthy of future consideration.

Table 2.10

Arts Organization Staff Sample Subscale Means, from Lowest to Highest

Factor	Min.	Max.	Mean	Standard Deviation
Partnerships	17	33	5.23	7.14
Satisfaction with school resources	30	56	5.25	11.43
Program evaluation	25	31	5.53	2.42
Communication	21	32	5.63	4.07
Program adaptation	15	20	5.94	1.60
Strategic planning	25	33	6.00	3.56
Organizational capacity	23	35	6.17	4.58
Funding stability	27	34	6.23	2.64
Environmental support	25	35	6.53	3.88
Collaboration	12	14	6.57	.98
Preparedness	12	14	6.8	.89

Comparison of stakeholder groups. Given the unique experiences of each stakeholder group, understanding if there are statistically significant differences in their responses adds clarity to the research and responds to the research questions by beginning to illuminate how and why the factors influence sustainability. If teachers and arts organization staff, for example, feel significantly different about a factor, such a result may shed light on the priority of the factor to different groups. In this example, a focus group question could therefore be crafted to learn more

about this difference. A sequential explanatory design supports this approach (Lochmiller & Lester, 2017), demonstrating the alignment of the design to the research questions. Such a difference between two groups may also illuminate misaligned perspectives or misplaced priorities among the groups. Comparing the responses of the stakeholder groups, therefore, responds to the research question and sub-question.

The questionnaire was effective in identifying the factors most likely to prevent program continuation across the three stakeholder groups, as well as areas of strength. All three stakeholder groups identified partnerships as a priority area of need within the DMIS program. Both teachers and arts organization staff identified partnerships as the lowest scoring factor on the questionnaire, while teaching artists ranked it second lowest. The mean partnership score for teachers was 3.71, while the teaching artist mean was 5.03, and the arts organization mean was 5.23. Although all three stakeholder groups are aligned in identifying partnerships as an area for improvement, their perspectives on the level of need across the program suggest that the most significant opportunity for improvement exists at the teacher level. A Kruskal Wallis test, however, revealed that there is no statistically significant difference between teachers, teaching artists, and arts organization respondents views on partnerships. Using an alpha level of .05 yielded a *p*-value of .051. Although there is no statistically significant difference between the means of the three groups on this subscale, all stakeholder groups identified partnerships as a priority area for improvement. Such tests of difference in means are valuable for considering systems levels for intervention.

Funding stability, the second lowest scoring factor for teachers (M= 4.23) and third lowest scoring factor for teaching artists (M= 5.28), ranked higher for arts organization staff (M= 6.23). Using an alpha of .05, a Kruskal Wallis test revealed statistically significant differences

between the funding stability scores of teachers, teaching artists, and arts organization staff with a *p*-value of .002. One explanation might be that teachers and teaching artists operate within the context of schools, while arts organization staff work within performing arts centers with dedicated development departments and sizable budgets. This indicates that opportunities to strengthen funding stability at the school level may potentially benefit the program.

As mentioned previously, the three stakeholder groups reported varying levels of satisfaction with school resources. As the lowest scoring factor for teaching artists (M= 4.36), the availability of appropriate and accessible time, space, and supplies for theater making is a clear frustration for teaching artists in the DMIS program. Arts organization staff ranked satisfaction with school resources second lowest (M= 5.25) among the factors. For teachers, on the other hand, satisfaction with resources came in fourth-to-last out of the 12 factors (M= 4.67). A Kruskal Wallis test revealed that these differences are not statistically significant. Using an alpha of .05 to test for significance, the *p*-value was .57. Although the stakeholders do not have significantly different satisfaction levels with school resources, the means of this subscale are an example of the nuance between the groups. Although this factor was the lowest for teaching artists, its mean was still higher than that of the teachers, who scored it in the middle of the factors. In other words, teachers agree with teaching artists that the resources for their theater programs are lacking, but the teachers also think there are three other factors of even greater need when it comes to sustaining their theater programs. For teaching artists, on the other hand, school resources are the biggest opportunity for improvement. This differing perspective in itself may contribute to the problem, and is worthy of exploration in the qualitative strand. Despite these differing perspectives, however, all three stakeholder groups ranked the arts professional

learning for teachers item as the lowest on the satisfaction with school resources subscale, indicating an area of priority for program improvement.

Arts organization staff reported relative confidence with strategic planning (M= 6.00) compared to teaching artists (M= 5.40) and teachers (M= 4.58). Although a Kruskal Wallis test revealed that the difference between the groups are not statistically significant (p= .13), there is a difference in priority between the stakeholder groups. Strategic planning ranked in the middle of all factors for arts organization staff, whereas it was in the bottom four factors for both teaching artists and teachers. Here again, we see the difference in organizational context for teachers who work in resource-strapped schools, arts organization staff who work in large, creative organizations, and teaching artists who are employed by the larger organization but work within the context of the school. This disparity may suggest that the long-term vision and plan for the program in arts organizations is deliberate and present, whereas those who support the program at the school level do not have the same opportunity or resources for such planning.

Comparison of cities. Given the difference in programming duration and sustainability success rates of the two programs, understanding the differences between program A and program B could uncover which factors lead to sustainability, thus responding to the research question. Since program B had maintained a 100% sustainability rate at the time of the needs assessment, researching the differences between the two cities could shed light on the nature of DMIS program sustainability.

Paradoxically, although program B has achieved an unprecedented 100% school continuation rate over its three years of programming, the means for all factors except collaboration were lower than those of Program A. This unexpected outcome could suggest any number of things. Perhaps certain factors carry more weight, or tenacity and self-efficacy push

programs forward despite significant hurdles; perhaps a specific program leader is influential in success, or district policies or professional development keep the momentum going. The qualitative strand of the study is therefore critical in understanding the complexities of sustainability across multiple contexts, and in answering the sub-research question. Despite program B's lower subscale scores, however, a series of Mann Whitney U tests revealed that these differences between cities were typically not statistically significant, with three exceptions noted below. Although the qualitative component of the study was invaluable for examining the nuance between the programs, stakeholders in program A and program B were similar in their responses across almost all of the factors.

Table 2.11 presents each factor's means according to city. As seen in Table 2.11 and consistent with the broader findings, both program A and program B identified partnerships as the lowest scoring factor; however, the difference between these scores indicate that program B's stakeholders (M= 3.36) are more concerned about DMIS's current capacity to develop partnerships than program A's (M= 4.37). Using an alpha level of .05 to test significance between partnership means of the two groups, a Mann Whitney test yielded a *p*-value of .069, indicating no statistical significance.

Communications is a notable difference in both rank and mean between the two cities, with the program B mean of 4.41 in its bottom three factors, and program A reporting a mean of 5.28, squarely in the middle of the factors. Using an alpha level of .05 to test significance between communication means, a Mann Whitney test yielded a *p*-value of .032, indicating a statistically significant difference between program A and program B.

Similarly, although program B scored funding stability lower than program A, it was the fifth on their list compared to second on program A's, suggesting a difference in priority, if not

severity. However, a Mann Whitney test revealed no statistically significant difference in the funding stability means between the programs. The programs' responses to the satisfaction with school resources subscale, however, paint a different picture. Program A reported a mean of 4.89, and program B reported a mean of 4.09. Using an alpha level of .05 to test for significance between satisfaction with school resources, a Mann Whitney test yielded a *p*-value of .024, indicating a statistically significant difference between the two programs. The arts professional development for teachers item within this subscale ranked as the lowest mean in both cities (Program A M= 4.18, Program B M=2.72). A Mann Whitney test yielded a *p*-value of .009, indicating a statistically significant difference between the two programs. Although neither program identified it as a priority, there was also a statistically significant difference between the means of the environmental support subscales ($p = .020$). Finally, both programs are aligned in their strengths, noting that program adaptation, preparedness, and collaboration are assets in their DMIS programs.

Table 2.11

Subscale Means and Rank by Program City, from Lowest to Highest

Program A factors, ranked	Program A Means	Program B factors, ranked	Program B Means
Partnerships	4.37	Partnerships	3.36
Funding stability	4.61	Satisfaction with school resources	4.09
Satisfaction with school resources	4.89	Communication	4.41
Strategic planning	4.89	Strategic planning	4.50
Program evaluation	5.06	Funding stability	4.56
Communication	5.28	Program evaluation	4.61

Program A factors, ranked	Program A Means	Program B factors, ranked	Program B Means
Organizational capacity	5.35	Organizational capacity	4.79
Environmental support	5.83	Environmental support	5.26
Program adaptation	6.07	Program adaptation	5.65
Preparedness	6.27	Preparedness	5.78
Collaboration	6.31	Collaboration	6.63

Quantitative Summary. The questionnaire data illuminated partnerships as the biggest sustainability factor of need within the DMIS program. Funding stability, satisfaction with school resources, and strategic planning also surfaced as potential barriers to program sustainability. Within the satisfaction with school resources scale, satisfaction with arts professional development for teachers ranked the lowest across all three stakeholder groups. The questionnaire also revealed that all stakeholders feel reasonably well prepared for the program and are strong collaborators (measured as task interdependence). Although these findings begin to shed light on potential programmatic improvements, qualitative data is necessary for a comprehensive understanding of the POP. Because of the study's sequential explanatory design, I used the quantitative findings to shape the focus group interview protocols. Each stakeholder group's focus group protocol was developed to explain and contextualize the quantitative findings (i.e., the interview questions focused on the biggest areas of need identified by each group). The qualitative strand of the study, therefore, was essential in understanding how to increase the sustainability of theater programs in low SES elementary schools.

Qualitative Findings

The qualitative strand of the study explained and expanded upon the quantitative findings, thus responding to the sub-research question. Within the *a priori* codes of partnerships, strategic planning, funding stability, and satisfaction with school resources themes emerged. In instances of positive experiences with the factors, the participants clearly articulated how such experiences improved their capacity to sustain the program. In instances of negative experiences, however, the participants expressed frustration, sometimes wondering if they would be able to sustain the program in spite of such hurdles. This dualism was evident with every factor discussed and across all three focus groups, which supports the literature, validates the questionnaire, and indicates the fragile state of elementary school theater programs in low SES schools. These findings are discussed next.

Partnerships. Partnerships, the biggest opportunity for improvement identified by the questionnaire, were thus a focus of the group discussions. All focus group participants discussed partnership challenges, successes, and opportunities, clearly demonstrating how this factor either enhances or impedes sustainability depending on the level of success.

Partnership challenges. There are some de facto partnerships within the DMIS program including the school-arts organization partnership and school-district partnerships. Many of the participants in the teacher focus group expressed frustration with the lack of district support for the program or the arts in general. One program B teacher stated,

> The district has a PR person and every time I contact her office, they're always too busy to come down and see anything… We sent our (performance) dates by December about our show in March, they still didn't show up. They sent us "oh, we're sorry, we're booked." I don't understand what they're doing. I really don't.

Another teacher in program B corroborated this lack of participation by the district, noting that they had invited district leadership to the performance in the first year of the program and received a notice that no one was able to attend due to scheduling conflicts. The teachers have not prioritized the invitation in subsequent years. Although district stakeholders' lack of attendance at a final performance is not the only indicator of a school's partnership success, the teachers noted it was deflating to routinely lack the visible support of the district. One teacher explained, "there is almost a disconnect between what they think is important and what is actually happening in our school."

With the demands and competing priorities teachers experience, the teachers reported that chasing down partnerships is not always an effective use of time. Further, the participants noted that time itself was a major hurdle for recruiting partners during the rehearsal process. One participating teacher explained,

> I think our downfall is that we are so wrapped up in the casting and the beginnings of the musical—the choreography and everything, that you turn around and you're like "Oh my gosh, showtime's in three weeks, what have we done?"

The teachers then brainstormed some potential solutions, including recruiting outside help to develop partnerships, but ultimately determined partnerships must be developed from within the school community. They lamented, however, the significant time required to do so. One teacher explained,

> The very first year when we wrote the grant, the other educator who helped to write the grant with me—she was not one of the "fab four," is what we call us—but she kinda acted as that. She would walk around to the car dealerships, to the stores, and ask for donations. It was very rudimentary and it didn't really happen. But it has to be someone

> at the school, because they know the needs, and you also don't have that communication barrier, because they are here every day.

When partners do participate, however, the effort teachers extend in maintaining the partnership pays off.

Partnership successes. One teacher in program A shared an example of a partnership her school works hard to maintain, and the results have been transformational for the school's theater program. The teacher explained,

> In our school we have what we call Pencil Partners, which are businesses that partner with our school and help us with programs, and they have been a tremendous help. They have donated money, they have donated people to come in and help us work on props and costumes. They gave us an engineer when we did *The Lion King* who designed Pride Rock and then they came in and built it for us.

By continuing to invest time in the partnership, the teacher noted that the school has been able to build more resources over the years. The Pencil Partner program has become instrumental in the sustainability of DMIS in the school. After the teacher had spent most of her budget renting sound equipment for years, the Pencil Partner program gifted a sound system with 10 wireless microphones to the school. This foundational gift freed the teacher to use her existing budget and fundraising efforts to cover different items. As a result, she noted, that "just last year I finally got enough money together to buy new monitors, to get my speakers mounted, and to have a full sound system including two handheld mics." Without the support of the partner, it is clear this teacher would still be using her limited resources on basic sound rentals each year.

When they work, the arts organization staff and teaching artists also notice and value school level partnerships. Two arts organization staff participants from program A noted the

impact Pencil Partners has had on helping schools sustain their programs by providing resources for the show. One participant noted, “we have several schools that their Pencil Partners are almost sponsoring the whole thing now, which is great.” A teaching artist in program A also identified the impact of the Pencil Partners program, but suggested an opportunity to better connect the program with DMIS:

> Every school has some kind of business or organization that is their Pencil Partner. I don’t think they tend to give a lot of money, but they give support and sometimes supplies. I’ve always thought that wouldn’t it be cool if you could invite people like that into rehearsal early on and let them see what’s going on and say “we have to find costumes for these 30 kids, and we have to figure out how to pay for the materials for a set.” I think that would be a great thing to do, and let them actually see the process, see the needs.

Despite this example of a strong partnership benefiting the program, there are countless other potential partners currently untapped.

Partnership opportunities. Although the majority of the discussions explored thriving or frustrating partnerships, the participants also indicated there were potential partners who have yet to participate in the DMIS program. Arts organization staff listed local and state politicians as partners who may improve the visibility and sustainability of DMIS. Both teachers and teaching artists suggested that partnering with schools of education or theater departments at local universities could lend manpower and expertise to the program. One teaching artist suggested partnering with local media outlets might build enthusiasm and garner resources for the program. It is clear, then, that partnerships can enhance sustainability when done well and that, despite some success stories, DMIS participants feel the program could benefit from more established

partnerships. Even when successful, however, partnerships need people to secure and maintain them, which can be difficult in environments that experience high staff turnover.

Funding stability and satisfaction with school resources. The needs assessment questionnaire identified both funding stability and satisfaction with school resources as opportunities for improvement across the DMIS program. Because schools need more than funding to develop new theater programs, the satisfaction with school resources subscale was added to the survey instrument to supplement it and ground responses in the school context. Resources range from human resources, to arts professional development for teachers, to materials and space, and funding is necessary to secure and maintain all resources.

Staff turnover. Turnover of principals, teaching artists, and teachers emerged as barriers to sustainability across all focus groups. The arts organization staff discussed the challenges of retaining a trained and skilled roster of teaching artists within the community. One participant shared that, "actors leave, they go to New York. They go to LA. We have a really strong team right now that knows how to support these schools and teachers, and we just want to keep them properly trained and prepared." The teaching artists, too, noted the instability of the profession. The former program A teaching artist stated, "once I had a couple of kids, it wasn't cutting the bills, so I had to get me one of them big, real jobs." Teaching artist attrition, however, mainly impacts the program at the arts organization level. As the employers, arts organizations must stay ahead of recruiting, hiring, and training teaching artists for the program, but a revolving door of teaching artists has less of an effect at the school level than it does at the arts organization level. The attrition of principals and teachers, however, may have a significant impact on DMIS program continuation.

Principal turnover can affect buy-in and momentum of the DMIS program in schools. A program A arts organization participant told of a teacher who has been operating DMIS in the school for six years and has had eight principals during that time. One program B teacher shared that a new principal started at her school after the DMIS program was up and running. The principal has not identified the theater program as a school priority and finds the Disney brand and its stories irrelevant and, sometimes, problematic. The teacher was matter of fact in her discussion, acknowledging that school leadership holds the decision-making power and there was not much she could do to influence school priorities.

Both the teaching artists and arts organization staff noted that teacher turnover is challenging at the school level, but at the broader program level it may carry some advantages. All focus groups reported that when teachers stay within a district, they often end up at another school in the DMIS program and thus bring with them the skills and capacity they established through the program at their former schools. Only time will tell if this effect will impact long-term program sustainability, though it is an important reminder that DMIS operates at many systems levels.

Most directly, however, teacher attrition impacts a school teams' capacity to continue producing a show after a key team member has left the school. One program B teacher explained,

> We work for districts, not for a school necessarily, and so we do have a lot of teacher mobility. One position at my school was cut from a full-time position to a half-time position, and then she would flip between two schools. If something like that happened to me, I could almost guarantee you there would be no (DMIS) program at my school.

Teacher turnover is so pervasive, it seems, that not only can it interrupt existing programs, it can even create unsure footing in foundational years. One teacher in program B shared,

> We had a high turnover in our staff at the beginning. When we started the application (for the DMIS program) we had a group of people who were very excited about doing it. And by the time we did it, three of those staff members had left and we hired new staff members who were gung-ho because they were new to the building. But they didn't necessarily understand the culture of the students, and they were having a difficult time with the enculturation of the kids into the theater program because it's brand new, and then to put on top of that the added stress of being in a new building… they didn't want to do it for a second year.

The teacher elaborated that she recruited a whole new team to replace the teachers who opted out in the second year. DMIS, however, tracks with a school and not with individual teachers, so the school did not receive teaching artist support in the second year. As a result, the four-person team comprised three people who had never produced a musical, and one with a single year of foundational training. It is easy to see, then, how all of the program's success can land in the hands of one lynchpin teacher. An important finding from the focus group interviews, therefore, is that teachers new to a schools' DMIS team (in year two or beyond schools) must have a means for building their theater content knowledge. Such knowledge is often built through arts professional learning, which the questionnaire revealed was the biggest area of need within the satisfaction with school resources subscale.

One teacher in program A shared that ensuring the sustainability of the school's theater program has become a priority as her retirement approaches,

> I have been trying to get everything in place to make it incredibly simple for whoever comes after me to just fall in and take over. How to do auditions, how to recruit teachers, how to recruit students, how to get a crew together. And I have kept very good notes about that entire process, and that organization has been good for me personally, because every year Disney seems to be easier. I am trying to make it sustainable by paving the way so that if somebody wants to take over, it can be done.

This teacher identified the potential lack of theater content knowledge of her replacement as a barrier to sustainability, and she developed a resource to help with the transition. Such an approach may improve program sustainability. This care and planning, it seems, is unusual. With such a large undertaking in the face of teacher and principal turnover, stress and burnout are barriers to continuation.

Stress and burnout. Oftentimes in DMIS, as in so many programs, teachers take on more work without more time or pay. All three focus groups noted the heavy lift of the program and the inevitable fatigue teachers face in its implementation. When factoring in the aforementioned teacher turnover, it is easy to see how one or two teachers could become the driving force of the program in the school, shouldering a significant burden. One program A teaching artist reflected, "really small school teams where you have maybe three teachers that are doing all the work, that's not sustainable." Sustainability is threatened, then, should those teachers burn out. One program A teacher summarized,

> It's been a great program, but it's a very tiring program. And by the time the performances come we're so exhausted and we always say, "we can't do this ever again." But then a year comes around, and we do it again.

The arts organization staff corroborated the threat of burnout to program continuation. "We have had a couple of schools that have suspended for a year or so just because, frankly, they say they're tired. This is such a big commitment for the whole semester that they just need a break." When considering the herculean task teachers face in mounting a production, the odds seem stacked against them when their collaborating peers leave for jobs at other schools. Add to that diminishing resources and unstable funding sources, and it is remarkable that teachers are able to continue programming over the years. The focus groups expanded on these topics and explained the ways in which unstable funding and poor access to resources can obstruct program continuation.

Programmatic barriers to funding. The very model of the DMIS program can be a barrier to continuation in resource-strapped schools. In a school's first year of the program, DMIS provides a grant of in-kind performance rights and materials (i.e., scripts, directors manuals, accompaniment tracks, choreographic videos) and in-school residencies from a team of teaching artists. Upon successful completion of the first year, schools are eligible for continued support, again receiving free performance rights and materials, but this time a single free professional development workshop replaces the teaching artist residency. Should schools choose to continue into the third year of the program, they are offered a 25% discount on a Disney musical (though are also welcome to produce any play or musical they choose, inclusive of non-Disney titles or original works) and another free professional development workshop. This model is designed so that the DMIS program can step back its support in hopes of developing a self-sustaining theater program in participating schools, while concurrently adding more schools to the program each year. The teachers, however, stated that the size of the reduction of support each year was too

large and may influence sustainability—the very thing it was designed to foster. As one teacher noted, "it's a big jump from going from a free thing, to paying for 75% of it."

Arts organization staff also identified programmatic barriers to funding and resources. The DMIS program has historically cautioned partner arts organizations about providing capital support to school programs due to fear that sustainability would be jeopardized should funding streams dry up. This mindset, it was revealed, may both limit funding and prevent the cultivation of strong partnerships between schools and community members. One arts organization participant expressed frustration at having a strong development department willing to fundraise for direct school support, but having to redirect the team's focus into other initiatives to uphold the DMIS model of school-initiated sustained programs.

District level barriers to funding. The DMIS program was built on an assumption that, with enough lead time, schools could generate the minimal resources needed to sustain a modest annual musical theater production. As it turns out, while this assumption may be valid, the practical access to such funds is much more complex. Both the teachers and arts organization staff expressed frustration with systems that can impede teachers accessing funds for their programs. An arts organization staff member in Program A noted that many schools begin the program with hopes that it will be self-sustaining—that is, that proceeds from ticket sales will fund the theater program's costs in future years. While many schools have success generating funds through ticket sales, the money itself does not always go back to the theater program and instead lands in the school's general fund. Sometimes even the act of selling tickets or otherwise fundraising can be a barrier. A teaching artist in program A noted that schools need to apply for a permit from the district 30 to 90 days in advance in order to fundraise. Teachers are often unaware of this requirement and are then unable to sell tickets or otherwise fundraise for their

shows, illuminating how the lack of institutional knowledge can be an obstacle to funding. Even when schools are successful in raising money directly for their theater programs, accessing those funds in the future is another story. A teacher in program A lamented that the district, "has a whole, huge packet of paperwork we have to complete to even be able to access our money. And so that is very frustrating."

School level barriers to funding. Participants in all three focus groups discussed the various ways schools attempt to raise money for the theater programs. In addition to ticket sales, one teacher noted that bake sales generate about $350 per event, another teacher discussed a successful flower sale, and an arts organization participant stated that many schools use crowd funding sites for bigger ticket items. Despite these efforts, fundraising within the context of low-income communities was reported as, at best, difficult, and, at worst, problematic. One teacher called on the district for support given the low-income bracket of her school community,

> I think we need some kind of transparency from the district to understand how they will support our [theater] program. It's really difficult to make the schools do this because when you're working at a school where 90% of the children fall below the poverty level, you're tapping the trees and expecting them to bring money for a bake sale or chips or something like that. You can only tap that tree so many times before it won't give you any more syrup.

Despite these hurdles, schools and arts organizations are increasingly resourceful in securing the materials they need for their DMIS-seeded theater programs.

Resource sharing. The arts organization staff in program A was recently successful in working with the school district to purchase a sound system with wireless microphones that DMIS schools could borrow for their productions. Another arts organization participant from

program B has begun early talks with the district to secure storage space for scenery and props, so that schools may more easily borrow items created by another school in the DMIS program. A teaching artist in Program A said that the schools have an informal network of costume sharing, noting that for one school known for its polished productions:

> Everyone has borrowed their costumes. I don't know how they're still hanging together. They are in a disadvantaged part of town and do everything brilliantly and put on these incredible shows. They loan their costumes out to schools. I've borrowed them two or three times.

It is clear, then, that despite barriers of poverty, bureaucracy, and programmatic constraints, some DMIS stakeholders have the tenacity to sustain their theater programs.

Strategic planning. The quantitative strand revealed that a strategic plan is essential for program continuation. Given that strong leaders are necessary to develop and implement a strategic plan, this factor goes hand-in-hand with organizational capacity, which includes leadership.

Leadership. All three stakeholder groups discussed the importance of leadership to the sustainability of their DMIS programs. At the arts organization level, DMIS is sustainable in large part due to top-down support. One arts organization staff participant in program B shared an anecdote demonstrating the impact of such support:

> The president of our board of trustees came to our very first student share event, and I remember him sitting in an aisle seat, right behind where the students were. Now, typically, our VIPs sit in the third or fourth row of the theater, so I'll tell you our VP of Development was looking at our seating chart that very first year and was like "what are you doing, putting them half way back?" I said, "trust me, watch this." And then of

course all the kids stand up and turn around and sing *It All Starts with a Dream*, one row in front of the VIPs. When he was walking out of the theater, he didn't say a word to me. He just squeezed my shoulder and walked past. And then that night at 11:00pm I got a passionate email from him copying our CEO and executive producer, and he just glowed about how impactful this was.

In program B's second year of the program, the arts organization's president of the board changed the date of a requisite board meeting to coincide with the culminating student showcase. This change meant that all board members were onsite, making attendance at the event more convenient. An arts organization participant in program A corroborated the importance of top-down buy-in, noting that the person responsible for the arts in their school district is on the board of the partner arts organization. She attributes the strength of the relationship between the arts organization and the district with this connection and alignment of leadership.

The teaching artists also acknowledged the value of effective leadership in the program. All teaching artists credited the arts organization staff with the relative success of their programs. The teaching artist in program B noted that the arts organization's director of education is a masterful networker who works hard to ensure buy in from all parties. In referencing her visits to schools, he said, "It's not just the teaching staff, and it's not just the administrative staff. She goes into the trenches and meets the people who keep the building afloat."

Invested leaders seem to pay off at the school level, too. When asked what makes the program sustainable in their schools, a teacher in program A immediately responded and credited her principal. She attributed this support with access to resources and more buy-in from a larger team of teachers, noting an unprecedented 16 teachers on the DMIS team at the school (the average team size is four). But, as with all factors, the other side of the coin can impede

sustainability. One teacher in Program B noted that her school's new principal does not seem invested in the program, which made the teacher worry about the future of theater in her school. Leaders at every level, it seems, can influence the tone and direction of school theater programs.

Mission. Mission alignment is central to the groups, organizational success, and growth that drive strategic plans (O'Connell, Hickerson, & Pillutia, 2018). In order to carry out strategic plans, stakeholders may benefit from being clear on the mission of the program, motivated to pursue it, and willing to implement the program with some degree of fidelity. One participant in the arts organization group reflected on a moment early in the program in which such mission alignment was lacking in a colleague who would be working on the program:

> This person was not used to having any outside partner detailing, "you're going to have weekly calls, you're going to do it this way." The autonomy was something that had to be given up. This is not why this person no longer works here but it reminded me that having any resistance on the administrative team can be a fly in the ointment and it's really important, not just from the top down, but that everybody believe in the genius of this program.

In as much as misaligned missions can be cumbersome in programs like DMIS, clear and aligned missions are often times a driving force that intrinsically motivates the participants. With one particularly motivated school team, a teaching artist noticed the effect of the mission and strategic plan:

> The principal and the teachers, they had a vision—not just within the scope of Disney, but beyond. And I think when they have a vision of, of "this is going to be great for our kids, we're going to create a program that's going to go beyond just doing Disney next year, we have other things that we want to do, other ways that the kids will learn to

express themselves"… I think that has a lot to do with whether or not they continue. In my first year, the school was like "oh we're gonna do this, we have this." They had a three-year plan in place. It was a completely different experience than some of the other schools that we've gone to, where they had no clue what they were going to do.

Two of the focus groups discussed students as the motivating force behind their commitment to DMIS and their school theater programs. The arts organization staff, for example, noted the long-term impact of the work, explaining that high school students who had participated in the program in elementary school are continuing to pursue theater and connect with the organization. The teachers, however, reported that student response was the very reason they work to keep offering theater each year. One program B teacher said,

> I think what makes it sustainable really is the kids, the excitement, the rite of passage, "oh my gosh, this is our year for the Disney Musical." And when you see kids that thrive so much, and you put that child first, you do anything you can to make it happen. If it means begging to have somebody build your scenery, or help you, or donations, anything you can do. Because you see that excitement and you watch the growth through this whole process. It is so important to them and it really gives them so many more opportunities, so much confidence, so much empathy, working that closely with kids that they don't normally work with. Every year we struggle and we think, "oh my gosh, how are we going to make this happen?" I don't know, but we will.

This statement exemplifies the capacity of a mission-driven team of teachers to continue programming despite significant odds. In order for missions to be realized, however, deliberate goals and a clear plan are necessary.

Goals and strategy. The focus groups revealed that defined goals and a clear strategic plan can nurture program continuation at the school level. The teaching artist group discussed the importance of carefully planning their approach to build the theater capacity and confidence of the teachers in the program. The arts organization staff discussed the planning necessary to keep cohorts of four to five schools operating, sometimes working with over 15 schools at a time depending on the needs of alumni schools. In a particularly clear example of how goal setting and planning can influence continuation, one arts organization participant shared her approach to working with a school in jeopardy of discontinuing the program:

> The one time we almost hit the skids truly was we had a brand-new principal, brand new teachers. But they wanted to still do the program. They just did not quite understand the level of commitment. So, it was that quick turnover. Everybody kind of had to think fast. We had to find other ways to support them and to give them some assistance in regards to kind of getting them up to speed. There was a lot of creative thinking and strategizing to keep that school going.

Perhaps because of their multifaceted jobs, limited resources, or time demands, however, teachers acknowledged the importance of goal setting, but stated they often fell short when it was time to develop and implement a plan. One teacher explained, "reflecting over the last years, we need to have some pretty clear goals and also a clear budget, instead of being willy-nilly. Maybe being the director is not a good thing, because I am super willy-nilly."

Across the focus groups, the teachers offered the most varied suggestions for programmatic improvement, ranging from an added community liaison function to bolster partnerships, to methods for onboarding new teacher team members, to budget setting and student recruitment. It seems, then, that teachers have plenty of goals and achievable ideas to

improve their theater programs, but that such ideas are not implemented, perhaps due to time constraints, the significant demands of the program, and limited opportunities to provide feedback.

Qualitative Summary. The qualitative strand added context and insight to the qualitative findings. When taken as a whole, the focus group data illuminated the interconnected nature of the factors contributing to the problem. For example, participants noted that workload and stress were two reasons why they were not able to spend more time recruiting partners. This scarcity of time also impacted their capacity to fundraise, access existing funds, and develop a program mission and goals. Similarly, the qualitative data reveled that teacher turnover eroded the organizational knowledge necessary to sustain a theater program, pointing to the importance of theater professional development for teachers as a key absent resource in the current DMIS model.

Conclusion

The needs assessment identified the factors that influence the continuation or discontinuation of elementary school theater programs seeded by DMIS and the ways in which such factors influence a school's capacity to sustain its theater program, thus answering the study's research questions. The quantitative component of the study identified partnerships, funding stability, satisfaction with school resources, and strategic planning as areas that could be strengthened to better sustain theater programs in elementary schools that participate in DMIS. Focus group interviews allowed participants to explain and elaborate on these findings. Through this qualitative component, participants identified (a) partnership challenges, successes, and opportunities, (b) the impact of staff turnover, stress, and burnout, (c) barriers to funding stability

and access to resources across various systems levels, as well as opportunities for schools to pool resources, and (d) the importance of leadership, mission, and goal setting to strategic planning.

The needs assessment study revealed the complexity of program sustainability and illuminated the multidimensional nature of theater program sustainability in low SES elementary schools. To improve program sustainability within the DMIS context, therefore, a multidimensional approach that aids stakeholders' capacity to build partnerships, secure stable funding and resources, maintain organizational knowledge in environments of high staff turnover, guide the strategic planning of the program, and evaluate and report on its impact should be considered. Although this sizable number of dimensions are a tall order for any intervention plan, the resources of the DMIS program and the scale of its reach provide a unique opportunity to systemically strive for improvement. The next chapter will examine possibilities for how DMIS could support an intervention to drive this improvement. Leveraging technology may be an efficient and effective method to differentiate improvement according to context-specific needs and maximize the benefits to participants.

Chapter 3: A Synthesis of the Intervention Literature

The needs assessment discussed in the previous chapter identified many areas for improvement in the DMIS program and revealed several factors that contribute to a school sustaining or discontinuing its theater program in the years following the initial DMIS residency. The quantitative strand of the needs assessment revealed partnerships, funding stability, satisfaction with school resources (inclusive of human resources), and strategic planning as the biggest areas of need within the DMIS program. Table 3.1 defines these constructs. The qualitative strand revealed how these factors contributed to or impeded a school's likelihood of sustaining a theater program seeded by DMIS. Participants noted teacher attrition, workload, lack of time, stress, burn out, bureaucratic barriers to funding, and the lack of a strategic plan as factors that might explain the quantitative findings. Given the range of needs assessment findings, a theoretical framework is helpful for organizing the findings and exploring the relevant literature.

Table 3.1

The Primary Factors Influencing DMIS Program Sustainability

Construct	Definition
Partnerships	The extent to which the program can develop connections to new and existing stakeholders (Schell et al., 2013).
Funding stability	The extent to which funding is consistent and provides a stable base for the program (Schell et al., 2013).
Satisfaction with school resources	The extent to which participants are satisfied with school resources to support the DMIS program. Resources include facilities, supplies, arts professional learning for teachers, staff, time, community support, student interest, and funding (National Center for Education Statistics, 2009).
Strategic planning	The extent to which systems and processes are implemented to develop the program, its goals, and strategies (Schell et al., 2013).

Theoretical Framework

The highly social nature of theater production, combined with the social experiences of teaching and learning, position sociocultural learning theory as an appropriate guide for the dissertation research. First developed by Vygotsky (1978), sociocultural learning theory posits that humans learn through social interactions mediated by the use of tools (e.g., language). This social experience is at the heart of theater production in which a multidisciplinary team learns from and pushes one another in pursuit of a shared creative goal. In DMIS, this social dependency is even more enhanced, as teachers new to the craft develop artistic capacity alongside students while applying their skills in a situated project. Leontev (1978) built on the triadic relationship between subjects, tools, and interactions identified by Vygotsky (1978) by further considering broader conditions of the learner and her environment (e.g., division of labor, historical conditions). Engeström (1987) developed a wider view. Rather than focusing on the individual at the center of Leontev's (1978) work, Engeström's (1987) activity theory considers the full activity system inherent in human learning.

Activity theory (Engeström, 1987) is a useful theoretical framework when considering interventions for the problem of practice. In line with its encompassing sociocultural learning theory, activity theory posits that human experiences are social and situated, but further considers the full activity system inherent in everyday life (Engeström, 1987). Engeström (1987) noted that within an activity system, events occur due to the interaction of actors, tools, rules, and norms. Table 3.2 presents Engestöm's (1987) definitions of the components of an activity system and specifies DMIS examples. Figure 3.1 illustrates activity theory as it relates to the DMIS program.

Table 3.2

Activity System Components and Corresponding DMIS Examples

Component	Engeström (1987) Definition	DMIS Example
Object	The result of the activity system	Students performing a stage musical
Outcome	The intended impact of the activity system	A sustainable theater program
Subject	The focal person doing the action	Teachers who produce the show
Instruments	The tools used in the activity	Scripts, fabric, theater-making knowledge, communication protocols
Community	The other participants in the activity	Collaborating students and teachers, partner organizations, parents
Division of labor	How participants split the work	One teacher directs, another choreographs, a student stage manages
Rules	The conventions, culture, and norms of the activity	Script licensing parameters, conventions for providing actor notes

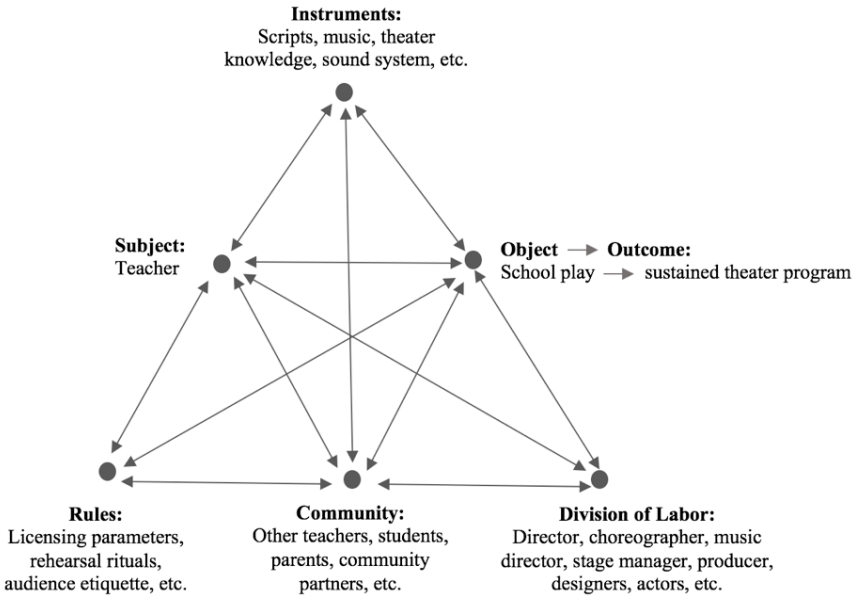

Figure 3.1. The DMIS Activity System. Adapted from *Learning by Expanding, an Activity-Theoretical Approach to Developmental Research*, by Y. Engeström, 1987.

Given its alignment with DMIS, activity theory is a useful framework for considering interventions to improve school continuation in the program. Next, activity theory is used as a lens for synthesizing the literature related to the synthesis in Chapter 1, the needs assessment findings, and potential interventions.

Building and Sustaining Partnerships

As identified in the needs assessment, the biggest opportunity for improving school program sustainability within DMIS is developing school partnerships. Such partnerships involve both the subjects and the community of the activity system. Although the DMIS program itself is a partnership between participating arts organizations and schools, all stakeholder groups reported broader partnership development as an area of need within the program. The focus group participants discussed partnerships with district personnel, families, universities, and local businesses, either citing examples of success (e.g., a partnering organization providing sound equipment) or discussing frustrations (e.g., absent district level support) about partnerships with

such constituencies. The focus group participants reported a lack of time and connections as barriers for initiating new partnerships, yet also indicated that when such partnerships were in place, programs had more support, garnered additional resources, and were easier to sustain. When considering interventions, therefore, understanding the nature of strong partnerships is paramount.

In a mixed-methods study of 20 thriving partnerships between arts organizations and schools, Seidel et al. (2001) determined that sustained partnerships involve a wide spectrum of stakeholders who feel ownership and control over the program. The authors noted that such broad buy-in results in programs being better able to endure times of instability. Schell et al. (2013), who developed the program sustainability assessment tool on which the needs assessment survey instrument was based, confirmed that partnerships are an essential component of sustained programs. Through a literature review, concept mapping, and expert interviews, Schell et al. (2013) developed a framework for program sustainability in which partnerships influence the capacity of programs to continue fulfilling their missions over time. The importance of partnerships for program sustainability discussed by both Seidel et al. (2000) and Schell et al. (2013) demonstrates that strong connections to a wide base of stakeholders are strategic for arts education programs. In the context of an activity system, such findings illustrate that a broad community can be valuable. Given the multidimensional nature of partnerships, it is important to define the construct and understand its key principles.

A Definition of Partnerships

The literature spans many types of partnerships, ranging from school-parent partnerships to school-community and even cross-sector partnerships. The term can refer to everything from financial and legal agreements between firms, parental engagement, collaborations between

groups, and a host of other formal and informal associations (Hora & Millar, 2012). Despite various classifications, Hora and Millar (2012) stated that most definitions include the notion that both parties within a partnership stand to benefit in a way that would not happen independently. Huxham and Vangen (2002) corroborated this definition and stated that the concept of collaborative advantage is key to all partnerships. Collaborative advantage is the idea that the partnership achieves something mutually valuable to each group (Huxham & Vangen, 2002). This chapter merges Schell et al.'s (2013) construct definition of partnerships (as used throughout the needs assessment and Chapter 2; see Table 3.1), with the notion of collaborative advantage. Partnerships, therefore, can be defined as groups of stakeholders working together for collaborative advantage. The collaborative advantage possible through partnership is valuable in educational contexts (Hora & Millar, 2012), where scarce resources and student achievement problems loom and external support is appealing (Sanders, Sheldon, & Epstein, 2005). A review of the partnership literature reveals common characteristics of successful partnerships that may inform an intervention. One foundational element is leadership.

Leadership support of partnerships. Through an analysis of data from 347 schools in 21 districts, Epstein and Sheldon (2016) determined that although family and community engagement policies are important foundations for partnership programs, on their own they are insufficient. The researchers found that principal support for partnership programs and district implementation of research-backed systems for developing them are key to successful programs (Epstein & Sheldon, 2016). Epstein, Galindo, and Sheldon (2011) reached similar conclusions in an earlier study. Given that education policy sets expectations for district support of school partnerships (Epstein et al., 2011; Epstein & Sheldon, 2016; Hora & Millar, 2012), the authors conducted a quantitative analysis of data from 407 schools and their corresponding districts to

better understand the influence of district participation on school level partnership success (Epstein et al., 2011). Using hierarchical linear modeling, the researchers found that both principal and district level support significantly impacted partnership program implementations and efforts to involve all families (Epstein et al., 2011). Whether a school administrator or someone from the district, it is evident that leaders—members of the activity system's community—play a critical role in initiating and sustaining school partnerships. Most of the partnership literature agrees that after a leader has initiated a partnership, a critical first step includes aligning goals and setting norms for the collaboration.

Goal alignment and partnership structures. Due to the collaborative nature of partnerships, clear direction-setting from the onset of the relationship is essential for program success (Hora & Millar, 2012; Huxham & Vangen, 2002). Through a qualitative case study examining school and community partnerships, Krumm and Curry (2017) determined that a shared vision is central to successful partnerships. In addition to facilitating buy-in and mission alignment, a shared vision also leads to shared responsibility, which improves partnership sustainability (Krumm & Curry, 2017). Huxham and Vangen (2002) supported this finding and noted that managing the goals of partnerships can help avoid the inertia that often accompanies them. Hora and Millar (2012), who conducted a longitudinal case study of a partnership program between K-12 schools and universities, also supported this finding. The authors concluded that goal and objective setting provide direction, motivate participants, and shape evaluations (Hora & Millar, 2012). Similarly, Ishimaru (2014) conducted an ethnographic study of a partnership between a low-income, minority parent group and a school district in which parents were considered educational leaders. Ishimaru (2014) suggested that by collaboratively developing shared goals, stakeholders could better impact student outcomes. Additionally, Van Tulder and

Keen (2018) proposed that cross-sector partnerships that set positive goals while transparently discussing the dangers of poor partnering were more likely to become aligned, constructive collaborations. Through these studies, the bidirectional movement of the activity system becomes clear. Communities can develop the rules of the activity system, and the rules can influence the community. And yet, Van Tulder and Keen (2018) stated that goal setting at the outset of a partnership is not enough. The authors suggested that building and strengthening this direction-setting consensus is also essential in later stages of the partnership (Van Tulder & Keen, 2018).

Partnership Challenges

The needs assessment reveled that partnerships can help schools better sustain their theater programs, but that lacking time and connections were challenges to initiating them. This finding is supported by the empirical literature—Sanders (2006) noted that a lack of time and difficulty identifying community partners are commonly reported obstacles to partnership development. Given that the needs assessment identified that teachers in the DMIS program lack the connections and time to develop partnerships with families, businesses, district personnel, and community organizations, a resource to help teachers efficiently identify and initiate partnerships may be a compelling area for intervention. Sanders (2006) developed such resources for schools to both identify and connect with potential partners. In addition to lacking time and connections, the literature suggests partnerships can be difficult for other reasons. Sanders (2006) noted that such reasons include a lack of participation, challenges of leadership support, the lack of funding, communication difficulties, and competing demands for focus. Sheldon and Sanders (2016) added conflicts with autonomy, school isolation, rigid school structures, and prescriptive rules as barriers to successful partnership development. Such a resource, then, would not be a fail-safe approach. Regardless, templates and tools that help teachers to identify and contact

potential partners could improve upon the challenges reported in the needs assessment. To develop such a resource, it is important to identify potential partner groups.

Identifying Partners and Navigating Their Cultures.

Sanders (2003, 2006) noted that universities, businesses, service learning organizations, school service organizations, and faith-based organizations are common community partners for schools. Each of these organizations could provide resources to help schools better sustain their theater programs. From volunteers to help with set or costume construction, to equipment loans, to donations of goods and services, the variety of community partnerships identified in the literature has the potential to address many of the areas for improvement identified by the needs assessment. To help schools generate these possibilities, Sanders (2006) provided action plans and templates for educators to organize their ideas and tasks. These activities help teachers identify new partners, improve existing partnerships, and win principal support. Sanders (2006) also provided correspondence templates for teachers to use throughout the activities. Such an approach could be an effective solution for initiating school level partnerships in the DMIS program. When partnerships begin work in earnest, however, the culture of two distinct groups intersects, which can lead to both opportunities and challenges.

When two organizations partner, each brings its norms and values to the collaboration. Such dynamics fall within the rules of the activity system (Engeström, 1987). When two distinct cultures interact, misunderstandings and contrasting norms can lead to confusion and conflict as partnerships spanning different industries or affinity groups typically include different professional languages (Huxham & Vangen, 2002). These differences in terminology can lead to misunderstandings. Similarly, differing operational procedures and structures can contribute to conflict (Huxham & Vangen, 2002).

Other research also identifies the intersection of culture as a potential pitfall of partnership. Hora and Millar (2012) noted that discussion of cultural intersection is ubiquitous within the partnership literature, but caution against "the common culture myth" (p. 1287) that often accompanies it. Rather than assigning a singular cultural identity to a large group (e.g., an organization), the authors posited that partnership participants should consider the specific cultural models of each affinity group (e.g., a department). Such cultural models provide a more granular look at the participating affinity groups, and include things like language and jargon, hierarchical structures, and collaboration preferences (Hora & Millar, 2012). To successfully negotiate differing cultural models, the literature suggests leveraging people adept at crossing cultural boundaries (Hora & Millar, 2012; Tsui & Law, 2007; Williams, 2002).

The partnership literature identifies boundary crossers as cultural brokers who are skilled at bridging communications and structures between groups (Hora & Millar, 2012; Tsui & Law, 2007; Williams, 2002). Williams (2002) conducted a mixed-methods study of boundary crossers using attitudinal surveys and interviews in the U.K. The study, which aimed to identify the core competencies of boundary crossers, identified communication skills, empathy, conflict resolution, and certain personality traits—including approachability and honesty—as common among boundary crossers (Williams, 2002). The study further identified that trust serves as a form of currency for boundary crossers, who build a reliable reputation across the participating groups (Williams, 2002). Krumm and Curry (2017) supported this finding and noted that successful school-community partnerships include individuals who prioritize relationship building. In their longitudinal case study of partnerships between K-12 schools and universities, Hora and Millar (2012) illustrated that boundary crossers identified the cultural models embraced by each group and leveraged them for collaborative advantage. Even an act as simple as having

DMIS teacher teams identify which member possesses the most boundary crosser characteristics could aide schools in building more successful partnerships. Helping DMIS teacher teams to identify and use boundary crossing techniques could be an area of intervention that helps schools build and improve partnerships.

Partnership Summary and Implications for the Intervention

The needs assessment study identified partnerships as an area for improvement in DMIS. Participants reported that successful partnerships improve schools' capacities to sustain the program, but indicated that barriers of time and lacking connections limited teachers in developing them. The empirical and theoretical literature also identifies these as common challenges to initiating and sustaining school partnerships (Sanders, 2006). Since educational policies encourage school partnerships (Epstein & Sheldon, 2016; Hora & Millar, 2012), fostering partnerships in DMIS could concurrently strengthen the program and help schools reach their partnership goals. Such an arrangement upholds the concept of collaborative advantage (Hora & Millar, 2012; Huxham & Vangen, 2002), which is central to successful partnerships. The literature spans various types of partnerships, but indicates some common themes of successful partnership design. By leveraging district and school leaders, selecting partners that provide collaborative advantage, setting goals, deliberately designing and planning the partnership's structure and processes, and managing the intersections of culture with boundary crossing techniques, stakeholders in the DMIS program may be better poised to recruit, develop, and maintain partners. A tool that provides participants with an efficient method for identifying and building partnerships (for example, by providing a list of potential community partners, templates, and forms for recruiting them) is a compelling potential component of an intervention. Such a resource could improve all points of the activity system, and may improve

program sustainability. Among other things, successful partnerships could help DMIS programs garner the resources necessary to endure. However, it is also important to consider resources themselves.

Maximizing Resources

The needs assessment revealed that both funding stability and dissatisfaction with school-level resources impede the sustainability of DMIS programs. Such resources—the instruments of the activity system—include the financial (e.g., production budget), material (e.g., costumes, scripts, microphones), content knowledge (e.g., arts professional learning for teachers), and human (e.g., teachers, organizational knowledge) resources necessary to bring the production to life. This section explores opportunities related to resources that may help schools continue offering theater after participating in DMIS. To begin with, one of the most foundational resources for any program is funding.

Funding Stability

As discussed in chapter one and supported by the needs assessment, the presence and stability of funding impacts the initiation of school theater programs and informs their durability. Although DMIS provides many of the resources necessary to start a theater program (i.e., performance rights, scripts, teacher guides, resident teaching artists), any additional cost a school deems necessary (e.g., a production budget for sets and costumes) is the responsibility of the school. Furthermore, although DMIS recommends schools compensate teachers for their work, it is ultimately principals or districts who handle school finances. As a result, limited resources combined with the afterschool nature of many elementary school theater programs can result in teachers volunteering their time. From teacher payment to production budgets, it is easy to see

how a stable stream of funding could improve theater program sustainability in low SES elementary schools.

The very nature of school funding, however, is precarious. Since public schools draw the majority of their revenue from state and local taxes, such funding is tied to the health of the housing and job markets (Baker, Sciarra, & Farrie, 2014). As a stop-gap during the recession that began in 2007, the federal government provided states with emergency supplemental funding to continue crucial education programs for which tax revenue was significantly reduced (Baker et al., 2014). As the economy recovered, however, and the initial federal funding was consumed, states managed lower levels of revenue than they faced pre-recession but without that targeted federal support (Baker et al., 2014). The vulnerability of tax revenue, combined with challenges of concentrated poverty and decentralized school financial systems, often leads to inequitable and unstable school funding (Baker et al., 2014). Although this problem may be outside of the scope of an intervention, the human resources necessary for school theater are essential for program continuation and may prove actionable. The needs assessment revealed that teacher turnover can erode the organizational knowledge necessary to sustain theater programs.

Organizational Knowledge

If nascent programs are to continue, it is important for schools to develop organizational knowledge so that programs can be sustained regardless of shifting policy, staff attrition, or instable funding. According to Nonaka (1994), organizational knowledge is the information created by members of an institution. Nonaka (1994) states that such knowledge takes two forms. Tacit knowledge is informal, personal, and often acquired through action, while explicit knowledge is organized and can be passed along more easily through formal procedures. Given

the two types of knowledge, four pairings exist that inform the ways in which knowledge is developed and passed along, detailed in Figure 3.2.

From \ To	**Tacit knowledge**	**Explicit knowledge**
Tacit knowledge	Socialization	Externalization
Explicit knowledge	Internalization	Combination

Figure 3.2. Nonaka's (1994) modes of knowledge creation categorizes four ways explicit and tacit knowledge are passed on. Socialization encompasses generating tacit knowledge from tacit knowledge, externalization encompasses generating explicit knowledge from tacit knowledge, internalization occurs when explicit knowledge is made tacit, and combination occurs when explicit knowledge is passed on to explicit knowledge. Adapted from "A Dynamic Theory of Organizational Knowledge Creation," by I. Nonaka, 1994.

Argote, Ingram, Levine, and Mooreland (2000) identified two essential phenomena related to successful organizations: the transfer of organizational knowledge, and the retention of such knowledge. Both could be key elements of an intervention designed to help sustain school theater programs.

The business literature defines knowledge transfer within organizations as the phenomenon of one entity affecting another (e.g., an improved process at one business location being adopted at another site; Argote et al., 2000). Argote et al. (2000) identified networks of organizations as having greater opportunity for success than traditional firms due to their capacity to benefit from the transfer of knowledge. This positions the DMIS program and its network of schools, teachers, partner organizations, and teaching artists as primed for knowledge transfer. In each DMIS program city, multiple schools stage shows each year. However, in the current program model, participating teachers have limited moments of cross-school networking.

Other than annual professional development and a culminating first year showcase, teachers from different schools do not gather in person. One area for intervention, therefore, may be opportunities to better connect participating teachers across the DMIS network. Given Nonaka's (1994) organizational learning theory, understanding how explicit and tacit knowledge are transferred across the DMIS enterprise could open up opportunities for programmatic improvement.

Since the priority level of improvement is at the school level, it is also important to consider the challenges of knowledge transfer within the school itself. To achieve sustainability, it is imperative for schools to retain the systems and skills necessary for theater programs regardless of the many drivers of the problem. But, as Nonaka (1994) pointed out, such development and transfer are a difficult pursuit. Tacit knowledge specifically, which is prominent in theater-making, may require frequent and continuous moments of transfer (Nonaka, 1994). Although the first year of DMIS involves a weekly in-person support session from teaching artists, in the second year and beyond schools only receive one annual professional development workshop. As such, an intervention that provides more frequent opportunities to build tacit knowledge may help schools better sustain their programs.

One of the primary models for transfer of knowledge is training (Argote et al., 2000). Moreland and Myaskovsky (2000) confirmed that teams who received training as a group outperformed teams who received training as individuals. The authors suggest that the group training approach allows the team members to not just learn knowledge, but to learn who knows which knowledge (Moreland & Myaskovsky, 2000). Although DMIS teams receive six months of robust weekly professional development in their first year, the frenetic energy of theater production and the divide-and-conquer methods typical of theater rehearsals mean that the full

group, despite being in the same space, are not always privy to the training of all team members. Further, since teacher attrition is common in low SES schools (Adamson & Darling-Hammond, 2012) and teacher turnover is frequent among DMIS teams as cohorts advance (Disney Musicals in Schools, n.d.), it is common for new teachers to join teams without the benefit of DMIS program training.

But challenges of transfer do not end with team dynamics. At the individual level, Szulanski (1996) found three factors that contribute to difficulty in the transfer of organizational knowledge. A lack of absorptive capacity, causal ambiguity, and difficult relationships can all deteriorate the transfer of organizational knowledge (Szulanski, 1996). As the needs assessment identified teacher workload and stress as contributing factors of the problem, it is reasonable to assume their capacity to absorb new organizational knowledge about a school theater program may be limited. Causal ambiguity results from an individual being unclear on processes and their rationale (Szulanski, 1996) and may be common when new teachers join established DMIS teams—another finding of the needs assessment. Difficult relationships, too, are present in school theater programming contexts, in which collaboration challenges (Booth, 2010; Hall et al., 2007; Somech, 2008) are commonplace.

Even with all these hurdles, transferring organizational knowledge is only one piece of the puzzle. Transferring knowledge is critical, but in order for theater programs to continue, such knowledge must be retained in the school. This organizational memory is built from tacit and explicit knowledge, with tacit being the more difficult type of knowledge to transfer and retain (Nonaka, 1994). As theater-making is a craft requiring the application of primarily tacit knowledge, school theater programs face another disadvantage here. An intervention that facilitates the transfer and retention of organizational knowledge, therefore, may help school

theater programs to become more enduring. In order to do so, however, the knowledge must be generated in the first place. To do so, professional learning may be key.

Professional Learning

Teachers are the human resources essential for theater production in the DMIS model and are the subjects of the activity system. The needs assessment identified arts professional learning for teachers as the biggest area of need within the satisfaction with school resources subscale. Further, as discussed in Chapter 1, teacher attrition and mobility are common in low SES schools (Adamson & Darling-Hammond, 2012). The needs assessment focus groups confirmed that such attrition and mobility are also threats to theater program continuation in participating DMIS schools. As the participants discussed, the extensive professional learning provided in the program's first year often leaves the school when an integral teacher moves on to another school or leaves the profession. At the same time, schools attempting to continue the program despite this turnover face challenges with low theater content knowledge of teachers new to the DMIS team. Due to problems of cost and scale, the DMIS program tracks with a school, not with individual teachers. Teachers new to the program in a school that has already completed the formative year of training, therefore, do not gain the deep professional learning at the center of DMIS, and thus lack the theater content knowledge necessary to produce a school play. Applied professional learning and its delivery, then, are compelling areas for potential interventions. By providing theater content knowledge through situated professional learning, teachers new to their school's DMIS seeded theater program could learn the foundational skills necessary to produce school theater.

Teacher mobility is a challenge in urban contexts, and designing professional learning with this in mind is essential (Desimone & Garet, 2015). Designing professional learning to

account for the teacher turnover identified in the needs assessment may help schools better sustain programs despite staff attrition and the addition of teachers new to the program in years following their initial DMIS residency. Dagen and Bean (2014) expressed the importance of considering all stakeholders in the development of professional learning. The authors stated that new teachers, no matter how well-trained, need context-specific professional learning (Dagen & Bean, 2014). On the other hand, existing teachers need professional learning to stay current and improve skills (Dagen & Bean, 2017). Beyond its essential capacity to onboard teachers new to the program, professional learning may also help to retain teachers.

The empirical literature supports this notion. In a fourteen-year longitudinal study of teacher preparation programs, Latham, Mertens, and Hamann (2015) determined that teachers who went through professional development school training programs—in which pre-service teachers participate in practical, situated professional development (e.g., co-teaching a math class with a certified teacher)—were more likely to be retained than those who went through traditional teacher preparation programs. Although preparing teachers to enter the profession is different from preparing teachers to facilitate new arts programs, the findings suggest that quality, situated professional learning helps teachers persist. Ovenden-Hope, Blandford, Cain, and Maxwell (2018) found similar results. In their evaluation of the Retain program, which paired early career teachers with mentors and developed professional learning communities across ten U.K. schools, the researchers noted that all participating teachers remained in the profession after one year, bucking trends of attrition typical of first year teachers. In the Retain program, participants regularly shared ideas and worked through challenges with peers in a professional learning community. Professional learning may also help retain instructors in after school programs, which is the usual format of DMIS. In their empirical study of staff mobility

and attrition in after school programs, Huang and Cho (2010) determined that programs with healthy staff retention offer continued professional learning opportunities. Professional learning, therefore, may assist schools facing turnover in their capacity to sustain theater programs. Given the breadth of literature on teacher professional learning, best practices can be incorporated into potential interventions to help avoid common pitfalls.

Best practices in professional learning. The theoretical and empirical literature provides substantial guidance on the development of professional learning programs, which can inform the intervention. The stagnant and often ineffective professional development traditionally offered to teachers is beginning to evolve into more impactful professional learning experiences (Desimone & Garet, 2015; Guskey, 2002). The revision of Learning Forward's (2011) standards for professional learning provides a research-supported benchmark for quality professional learning. These seven standards include: learning communities, leadership, resources, data, learning designs, implementation, and outcomes (Learning Forward, 2011). The standards are a tool that can help to create quality, ongoing, systemic professional learning, rooted in teacher agency and discourse. Other best practices are also recurrent in the literature. For example, Darling-Hammond, Hyler, and Gardner (2017) conducted a literature review of over 30 years of research and identified seven common features of effective professional development. These features include being content specific, active, and collaborative; incorporating modeling; utilizing coaching; participating in feedback and reflection; and offering the learning for a sustained duration of time. When considering potential interventions, applying these best practices to address the findings of the needs assessment is compelling.

The previously discussed assertions of Dagen and Bean (2014) are also supported by the empirical literature, which demonstrates the value of professional learning for onboarding

teachers to a new curriculum or initiative. In a two-year study of the implementation of a new science curriculum in an urban middle school, Doppelt, Schunn, Silk, Mehalik, Reynolds, and Ward (2009) studied student achievement. The researchers found that students of teachers who participated in professional development during the implementation of the curriculum performed significantly better on knowledge tests than those whose teachers implemented the curriculum without the professional development (Doppelt et al., 2009). Similarly, McGill-Franzen, Allington, Yokoi, and Brooks (1999) conducted a randomized controlled trial of kindergarten classes across a large, urban school district. Some kindergarten teachers were provided with classroom books and professional development on early literacy. Others were provided with the books alone. The researchers determined that students whose teachers received both the books and the professional development performed better across all early literacy measures than those who received the books alone. When considering the problem of practice, teachers new to DMIS who inherit its various tools (e.g., teacher guides, director's scripts, and choreographic videos) may be unsuccessful in applying them without support for their professional learning.

Professional learning, however, must be carefully crafted to be effective. Penuel, Gallagher, and Moorthy (2011) determined that the design of professional learning impacts its success. Through a randomized controlled trial of 53 middle school teachers in a large, urban district, the researchers determined that teachers who received specific, applied professional learning fared better in student achievement than those who received less specific instruction or more rote professional development (Penuel et al., 2011). Between the use of materials and the qualities of professional learning, these studies illustrate the importance of instruments to the activity system. But instruments alone are insufficient. In order to be successful, professional

learning must effectively serve teachers, the subjects of the activity system, by incorporating learning theory.

Professional development and learning theory. Professional learning that does not achieve teacher change is ineffective, and so the aim of professional learning is often to improve teacher beliefs and skills (Guskey, 2002). In line with a sociocultural approach to learning in context, Guskey (2002) suggests that teachers are more likely to change their beliefs after implementing a new practice in context and seeing its impact on students. In contrast to traditional approaches that attempt to change educators' attitudes before implementation, Guskey's (2002) model utilizes many of the best practices noted by Darling-Hammond et al. (2017) and embraces the sociocultural approaches of situated application and teacher agency (Raphael et al., 2014). Since the subjects of the activity system (i.e., teachers) are adults, however, understanding adult learning theories is also key.

Themes in adult learning theory. The literature also includes factors of successful adult learning. Knowles (1984), who developed andragogy, or adult learning theory, posited that adults are intrinsically motivated learners with more practical knowledge and experience than children. Building on Knowles work, Mezirow (1991) determined that adult learning could be informational or transformational in nature. Rohlwing and Spelman (2014) reviewed the foundational and current literature on adult learning. Across various frameworks and theories, the authors identified four factors that influence the learning of adults. They are (a) experience, (b) reflection, (c) dialogue, and (d) context (Rohlwing & Spelman, 2014). As potential interventions are intended expressly for the learning of adults, incorporating Rohlwing and Spelman's (2014) themes of effective adult learning will help to develop a tool rooted in the sociocultural foundation of the theoretical framework and tailored for adult participants. Because the subjects

of the activity system are adults with multiple demands for attention and limited time, however, it is equally important to consider how potential interventions can mitigate teacher stress.

Teacher Stress and Burnout

When discussing the human resources necessary to sustain the DMIS program, the needs assessment focus group participants noted that teachers in the program face challenges with heavy workloads, stress, and burnout. As teachers elect to participate in DMIS in addition to their fulltime jobs, this finding is not surprising. Given the interconnection of the activity system, the inner state of its subjects has a direct impact on all other points of the system. Many teachers are intrinsically motivated to enter the profession, and a central factor of that motivation may be the drive to help children succeed (Phillips & Hatch, 1999). The needs assessment verified this phenomenon with in the DMIS context. Participants noted that, despite the program's significant workload and resulting stress, watching their students work hard to perform a stage musical was intrinsically motivating. Therefore, if the intervention can reduce the stress caused by the workload of DMIS, teachers may gain more intrinsic rewards by being better able to focus on the joy of staging a show with students. While the potential intervention cannot reasonably address factors leading to teacher stress and burnout in low SES schools more broadly, it may be able to alleviate stress related to the DMIS program. To do so, it is important to understand the nature of teacher stress.

In a quantitative study of 162 rural teachers, Rumschlag (2017) determined that teacher burnout manifests through a lack of personal accomplishment, depersonalization, and emotional exhaustion. Of particular relevance to the problem or practice, Rumschlag (2017) noted that the incorporation of new practices can impact teachers' perception of personal accomplishment. Given that teachers new to theater making are the typical participants in DMIS, the demands of

learning a new program and discipline may erode participating teachers' sense of accomplishment. The theoretical literature supports this concept. In his seminal work on self-efficacy, Bandura (1977) posited that mastery experience is the primary contributor to an individual's efficacious beliefs. In a program in which adults learn new content and pedagogy, mastery takes time, and a deflated sense of accomplishment can follow the inevitable failures inherent in the process. Given this dynamic, identifying an intervention that can mitigate stress and burnout by building theater-making efficacy would be savvy.

The classroom appraisal of resources and demands developed by Lambert, McCarthy, O'Donnell, and Wang (2009) examines stress in teachers. The researchers argued that stress is not an ambiguous feeling, but rather a measurable difference between the resources provided by schools and the demands educators face in their classrooms. Their instrument, which has strong validity and reliability (with Cronbach's alphas ranging from .83 to .94), has been used to confirm that the disparity between resources and demands can contribute to teacher stress. Fitchett, McCarthy, Lambert, and Boyle (2018), for example, employed the instrument to measure stress using data from the U.S. National Center for Education Statistics' Beginning Teachers Longitudinal Study. The researchers determined that beginning teachers who reported more burnout symptoms also reported a greater disparity between available resources and classroom demands. The study also determined that beginning teachers who participated in support programs were at less risk for stress than those who did not (Fitchett et al., 2018). Such research suggests that DMIS could reduce the gap between its provided resources and demands on teachers to mitigate the stress and burnout identified by the needs assessment. Although the intervention could provide teachers with the professional learning and tools necessary to reduce

this gap and sustain the program, schools, too, have an opportunity to better leverage the resources of the community.

Resource Pooling

Like any endeavor, school theater production requires resources. Although all that is necessary to create theater is a story to tell, people to tell it, and an audience to take it in, most DMIS schools create costumes, sets, and props to enhance the storytelling and meet student and parent expectations (Disney Musicals in Schools, n.d.). Additionally, space (i.e., an auditorium) and equipment (i.e., sound and lighting instruments) can enhance the production and improve its quality. Since DMIS focuses its services in low SES schools, however, many schools do not have the resources necessary to develop the theater programs they envision. The needs assessment identified that participants expressed dissatisfaction with the school level resources available to their nascent theater programs, revealing another area for program improvement. Resources like production materials and equipment are instruments of the activity system, uniquely related to both teacher stress and partnership opportunities.

Throughout the DMIS network, some resourceful teachers have developed informal means to pool their resources across schools. Outside of the formal programing structure, teachers have exchanged information at professional development workshops or communicated on social media groups to borrow costumes or set pieces from another school's production for use in their own school. In one notable case, a teaching artist in Las Vegas established a non-profit organization called Parts for the Arts to facilitate this activity across participating Clark County schools (Parts for the Arts, 2018). In addition to donations from professional productions, Parts for the Arts stores sets, costumes, and props from school performances in a warehouse space that other teachers can draw from, free of charge (Parts for the Arts, 2018). The empirical

and theoretical literature suggests such resource pooling is an effective way to garner resources in low SES schools (Ainscow, Mujis, & West, 2006; Liu, 2018).

From their study of four U.K. initiatives designed to develop schools with limited resources, Ainscow et al. (2006) concluded that schools often found success by pooling resources. Students in one vocational school, for example, were interested in catering courses, but the school lacked the facilities necessary for instruction. By partnering with another school that had a commercial kitchen, the school was able to meet student demand by offering the course (Ainscow et al., 2006). When considering the partnership literature discussed previously, it is clear that resources could be the source of collaborative advantage in school-to-school partnerships. Other research supports this. In a review of the niche literature on the topic, the U.K. Department for Education (2015) noted that many studies document collaborative advantage as the impetus for forming school-to-school partnerships. For example, Busher and Hodgkinson (1996) noted that some schools find it mutually beneficial to share resources and services due to economies of scale. Turner (2004) found that combined professional development and curriculum development provided collaborative advantage to partnering independent schools.

In a qualitative study of urban schools in China, Liu (2018) determined that resource pooling in schools could improve educational access and leverage economies of scale to increase their programming. Liu (2018) reported that an alliance between an accomplished school and a lower-performing school was mutually beneficial. The lower performing school was able to share the some of the resources of the higher performing school. The higher performing school, on the other hand, benefited from its teachers gaining practical experience with lower performing students, which ultimately improved their instructional practices (Liu, 2018). In considering the

theatrical context of DMIS and the range of resources and prior knowledge between participating schools, schools that pool physical (e.g., sets and costumes), digital (e.g., designs and staging), or instructional resources may benefit from the collaborative advantaged central to partnerships (Huxham & Vangen, 2002). Providing a forum for such resource pooling could be a compelling component of the intervention.

Maximizing Resources Summary and Implications for the Intervention

From people, to time, to space, to materials and funding, school theater production requires many resources, all of which are instruments of the activity system. The needs assessment study identified that stakeholders' dissatisfaction with resources can be a hurdle for program continuation. Some of the most significant resources identified as lacking in the needs assessment were human resources. Since low SES schools often face challenges of teacher turnover (Adamson & Darling-Hammond, 2012), it is not uncommon for teachers to leave the school after participating in the program's professional learning residency. As a result, organizational knowledge about the school's theater program becomes diluted. Identifying means for retaining such organizational knowledge could be a viable path for the intervention. More importantly, incoming teachers often lack the content knowledge and training necessary to successfully continue the school's theater program. Professional learning, therefore, is a compelling option for an intervention to improve sustainability. Finally, due to financial constraints, DMIS schools often lack the funding, materials, and equipment necessary to produce the theater they envision. Informal resource pooling in the program has shown anecdotal success. The empirical literature also confirms that resource pooling can be an effective strategy for doing more with less. Such an approach could be incorporated into an intervention for improving

school theater program sustainability. Resources, however, are just one point on the activity system. To improve the full DMIS activity system, a strategic plan may be necessary.

Strategic Planning

The needs assessment participants revealed that the presence or absence of a strategic plan can influence the sustainability of school theater programs. Strategic plans are instruments of the activity system, developed by the subjects and community, in service to the object. Strong strategic plans also cover the activity system's division of labor and consider its rules. Ideally, strategic plans lead to an activity system's successful achievement of its outcome. Strategic plans, therefore, incorporate resources, systems, ideas, and practices to guide an organization to its future (Balkar & Kalman, 2018) and encompass the full activity system. One common approach to strategic planning includes several steps that lead organizations to a concrete documentation of goals and necessary actions. Guerra, Zamora, Hernandez, and Menchaca (2017) summarized these steps as follows:

- Develop a vision and mission statement.
- Conduct an analysis of the organization's strengths, weaknesses, opportunities, and threats.
- Conduct a gap analysis to understand the difference between the organization's goals and its current status.
- Prioritize needs and goals based on the gap analysis.
- Develop an action plan in response to the needs and goals, inclusive of workload distribution, timeline, and procedures.
- Convene a planning committee representative of the full organization to guide progress.

However, strategic plans need not be limited to the organizational level. Gurerra et al. (2017) stated that departments within an organization and stand-alone projects may also benefit from strategic plans. DMIS is a school project that requires the subjects and community of the activity system to collaborate in new ways. Since the focus group participants noted that absent or weak strategic plans may prevent program continuation, interventions that help teachers develop strategic plans for DMIS may lead to improvement. To get started, however, the literature agrees that broad stakeholder participation is essential for buy-in (Balkar & Kalman, 2018; Gurrera et al., 2017; Rhine, 2015).

In a qualitative case study on arts organizations' leadership styles and the strategic planning process, Rhine (2015) determined that employees who were actively engaged in strategic planning were more likely to describe the strategic plan and organizational leadership in positive terms than those who were not involved. The author argued that traits of authentic leadership are useful for developing the inclusive environment ideal for strategic planning (Rhine, 2015). Similarly, in a case study of a large university's development of a strategic plan, Hope (2017) noted that collective thinking was a guiding principle. The university developed a team comprised of multiple stakeholders, including faculty, students, staff, and partners (Hope, 2017). Lane, Bishop, and Wilson-Jones (2005) also outlined the importance of communication and involving stakeholders when developing a strategic plan. Strategic plans are practical tools that guide the direction of an organization or project and may be a compelling area for intervention.

Strategic Planning Summary and Implications for the Intervention

Strategic plans guide an organization, department, or project team to fulfill its goals by considering its resources, opportunities, threats, and progress (Gurerra et al., 2017). The needs

assessment study revealed that DMIS programs with strong strategic plans were better poised to sustain theater production than those with weak or absent strategic plans. The literature suggests that strategic plans that involve a wide spectrum of stakeholders gain more support than top-down models (Hope, 2017; Lane et al., 2005; Rhine, 2015). Developing an intervention, therefore, that aids in teachers' inclusive development of strategic plans is compelling. The intervention could provide teachers with guidance on developing a strategic plan according to the steps noted by Guerra et al. (2017). By providing templates and instructions for developing the plan and winning broad buy in, DMIS participants may be able to generate a clear plan to better sustain their theater programs. Given the needs assessment finding on teacher stress from program workload, however, it is important that the development of a strategic plan does not add more work to DMIS teachers' already demanding jobs. Accordingly, it is important to develop an efficient and accessible method for creating a strategic plan. Since DMIS teams gather regularly for production meetings, the intervention could add the development of a strategic plan into provided production meeting agendas. This need to innovate programmatic improvement without further taxing DMIS teacher teams is a guiding principle for the development of the full intervention.

Necessary Foundations

The previous discussion synthesized literature related to the findings of the needs assessment and is useful in shaping an intervention designed to address the needs of DMIS teachers to better sustain their theater programs. There are some additional factors, however, that may be necessary conditions for the success of the intervention. Although reviewed in Chapter 1 as they relate to the nature of the problem, this section expands on the literature surrounding these factors to better understand how they may serve as the foundation for an intervention that

responds to the specific findings of the needs assessment. Leadership support, teacher theater self-efficacy, and teacher theater content knowledge may be as essential to the intervention as its capacity to improve the previously discussed findings of the needs assessment.

School Leadership Support

DMIS is a competitive application-based program that requires principal support and approval. As such, school leadership is typically aware of and supportive of the program in selected schools. Although the needs assessment revealed that principal turnover can erode leadership support of the program, the needs assessment also found that schools without such turnover typically have a base level of administration awareness and support. The literature confirms such support as essential for program sustainability. In a study of an intervention designed to prevent delinquency, Kam, Greenberg, and Walls (2003) identified principal support as one of two factors necessary for program success and continuation (the other being fidelity of implementation by teachers). Other research supports this claim, noting that principal behaviors and attitudes can affect the success and fidelity of teacher implemented programs (Gottfredson & Gottfredson, 2002). As DMIS schools must demonstrate principal support for selection in the program, this is an important assumption on which the intervention must be built. Since participants in the needs assessment noted principal turnover as a barrier to sustainability, however, the intervention must concurrently provide resources for teachers who need to win the support of principals new to the school.

Teacher Self-Efficacy

Chapter 1 explored low teacher theater self-efficacy as it related to the absence of theater offerings in schools. The literature confirms, however, that teacher self-efficacy is also important for program implementation and continuation. For example, Stein and Wang (1988) determined a

relationship between teachers' success in implementing a program and their self-efficacy beliefs. Similarly, Guskey (1988) identified a relationship between teacher self-efficacy and attitudes about implementing a program. In a particularly relevant study, Berman, McLaughlin, Bass, Pauley, and Zellman (1977) identified a relationship between teacher's self-efficacy beliefs and their likelihood to continue programs after initial implementation. When combined with the literature concerning teacher theater self-efficacy explored in Chapter 1, it is clear the intervention must strive to build theater teacher self-efficacy as a foundation from which program sustainability skills can grow. Given that mastery experience is the factor most likely to shape one's self-efficacy beliefs (Bandura, 1977), growing teachers' theater content knowledge responds to both the need to develop positive self-efficacy beliefs, and for improved arts professional development as identified by the needs assessment.

Teacher Theater Content Knowledge

Pedagogical content knowledge is a teacher's combined subject-specific knowledge and teaching skill of that subject (Shulman, 1966). Several studies have identified that professional development on pedagogical content knowledge can lead to changes in teachers' practice and improved student outcomes (Carpenter, Fennema, Peterson, Chiang, & Loef, 1989; Franke, Carpenter, & Levi, 2001; Saxe, Gearhardt, & Nasir, 2001). In order to develop pedagogical content knowledge, however, teachers must first have content knowledge of the subject at hand. As DMIS trains primarily non-theater teachers in foundational theater making, building the theater content knowledge of teachers may be an important foundation for sustaining theater programs. The needs assessment findings support this, as participants ranked arts professional development for teachers as the lowest category in the satisfaction with resources subscale. Given that mastery experience is one of the factors that shape an individual's self-efficacy beliefs

(Bandura, 1977), developing DMIS teachers' theater content knowledge may concurrently improve their theater teaching skills and enhance their theater teaching self-efficacy. The literature supports this. In a study of pre-service teachers' reading content knowledge and self-efficacy beliefs, Leader-Janssen and Rankin-Eckerson (2013) determined that self-efficacy and content knowledge gains were positively correlated for teachers who participated content knowledge professional development. Professional development, therefore, is a compelling mechanism for establishing the necessary foundations of school leadership support, theater teacher self-efficacy, and teacher theater content knowledge. In order to develop the intervention and synthesize its underlying literature, a conceptual framework for sustainable school theater programs can add clarity.

A Conceptual Framework

Conceptual frameworks visually present a researcher's model for exploring a problem (Grant & Osanloo, 2014). Whereas theoretical frameworks are developed from established theories, conceptual frameworks capture the assumptions and constructs on which the research is based (Miles & Huberman, 1994). Conceptual frameworks are particularly helpful for demonstrating how concepts within a research plan are structured (Grant & Osanloo, 2014). The conceptual framework for the intervention, therefore, (a) presents the aforementioned foundations necessary for school theater programs to endure, on which (b) the program sustainability elements identified in the needs assessment can be developed, which (c) may lead to sustainable school theater programs. Figure 3.3 details the conceptual framework for the intervention.

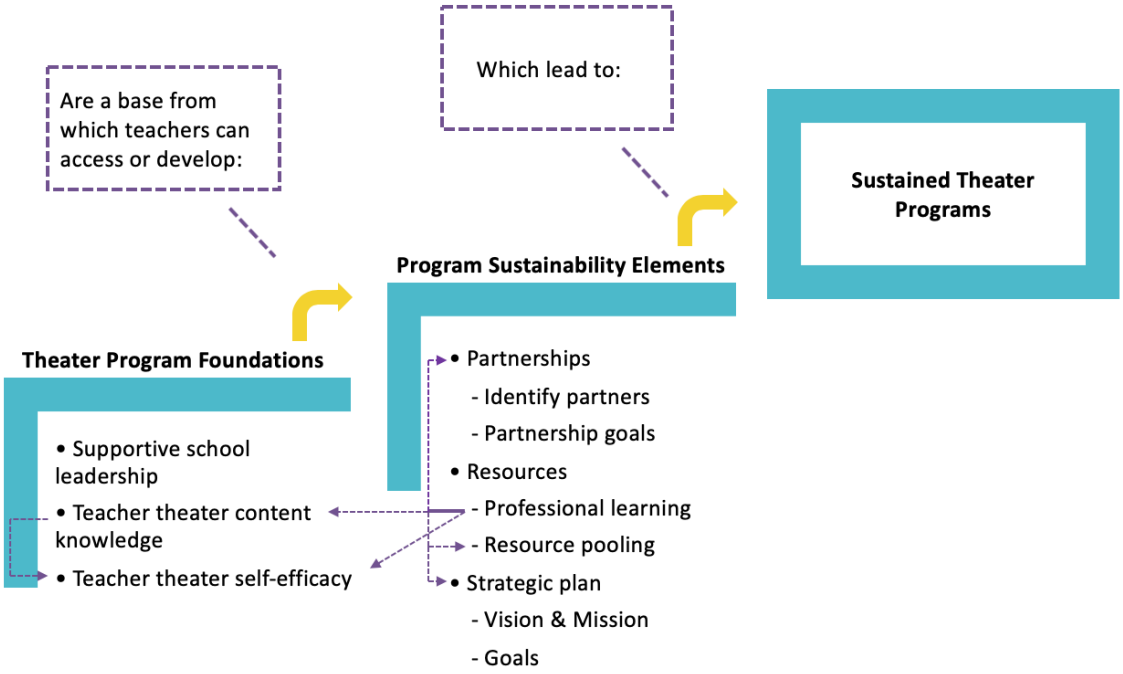

Figure 3.3. The conceptual framework for the intervention. Three primary foundations for sustainable school theater programs include supportive school leadership, teacher theater content knowledge, and teacher theater self-efficacy. From these foundations, school theater programs that identify partners and develop partnership goals, have access to theater professional learning and resource pooling, and develop a program vision, mission, and goals may develop a more sustainable theater program. Arrows indicate relationships among the components (e.g., as previously discussed, teacher theater content knowledge can influence teacher theater self-efficacy; professional learning can influence teacher theater content knowledge).

The Intervention

The needs assessment supported Schell et al.'s (2013) findings that program sustainability is multidimensional. DMIS stakeholders reported that challenges with partnerships, funding stability, satisfaction with school resources, and strategic planning can be barriers to theater program continuation. Given DMIS's reach across dozens of states and hundreds of schools,

developing stable school level funding is outside of the scope intervention. Partnerships, school resources, and strategic planning, however, are actionable opportunities for improvement. Accordingly, an intervention that addresses these domains will allow schools to garner the support for their individual needs. In this way, the proposed intervention can be thought of as a distribution mechanism for the training and tools teachers need to better support long term program sustainability. A digital platform providing educators with resources, professional learning, networking, and tools that respond to the findings of the needs assessment could enhance DMIS across the full activity system and improve school program continuation rates. This digital platform is called DMIS: StageConnect. Table 3.3 summarizes how StageConnect will respond to the findings of the needs assessment and illustrates connections to the theoretical framework. The next sections of this chapter discuss the platform in detail and reviews the literature supporting its proposed modalities and goals. As professional learning responds to many of the needs assessment findings, the foundation of StageConnect will be online professional learning.

Table 3.3

DMIS: StageConnect's Alignment to the Needs Assessment Findings and Theoretical Framework

Needs Assessment Finding	StageConnect Functionality	Activity Theory
Partnerships	• Professional learning on partnership development • Templates and resources for partnership initiation • Reporting functionality to communicate progress and needs with partners	Instruments Community
Funding stability	Outside the scope of the intervention	Instruments
Satisfaction with school resources	• Professional learning community to onboard new teachers, develop content knowledge in teachers, archive	Subjects Instruments

Needs Assessment Finding	StageConnect Functionality	Activity Theory
	organizational knowledge, and foster teacher collaboration • Synchronous mentoring with teaching artists and industry professionals • Resource pooling forums and other program-wide networking opportunities	
Strategic planning	• Professional learning on strategic plan development • Templates and resources for strategic plan development and implementation • Collaboration forums and tools for strategic plan fidelity	Full activity system

Online Professional Learning

Due to the scale of DMIS and budgetary restrictions, an online professional learning platform is a more viable solution than additional in-person support. The capacity of such a platform to scale with the program provides a cost-effective and efficient approach for program wide adoption. Lieberman and Miller (2014) made a similar argument and noted that many schools facing budget cuts are embracing online professional learning. In addition to being an economical solution to scaling professional learning, the flexibility of the platform may be appealing to teachers. Hargreaves (2014) noted that online platforms provide new options for the time and place in which professional learning occurs. Such flexibility could reduce teachers' stress and make the DMIS experience nimbler. As teacher stress is a barrier to program sustainability identified by the needs assessment, the flexibility of StageConnect is an appealing benefit of the online, on-demand modality of the proposed platform. Beyond being an economically viable and flexible option, the literature suggests that online professional learning can be effective.

Efficacy of online professional learning. Click2Science (C2S) is an online professional learning environment for out-of-school-time staff and volunteers in science, technology,

engineering, and mathematics programs (Wever-Frerichs, Pearman-Fenton, & Wingert, 2018). Like DMIS, C2S serves teachers and others working in afterschool programs across the country. The C2S platform is rooted in the previously discussed work of Knowles (1980) and employs a model in which participants apply their knowledge throughout the professional learning experience. The C2S platform upholds many of the previously discussed best practices in professional learning, including that the learning be applied in context (Gusky, 2002). Since StageConnect will be designed to support school productions in real time, a similar model could be leveraged. Through C2S, users participate in a blend of self-directed online lessons, in-person trainings, video demonstrations, synchronous and asynchronous webinars, and coaching (Wever-Frerichs et al., 2018). A pilot study of the platform showed promising results. In a qualitative study of the platform across three sites, Hawley, Stevens, Pense, and Perez (2017) noted that participating staff reported favorable views of C2S, facilitators improved in 11 of 12 measures on the observation protocol utilized, and participating youth reported positive views of science. Although the study's sample size is too small to be generalizable, this research is promising.

Other studies also indicate that online professional leaning is an effective alternative to in-person models. In a randomized controlled trial of online professional learning for mathematics teachers, Dash, de Kramer, O'Dwyer, Masters, and Russell (2012) determined that the teachers who participated in online professional development demonstrated greater gains in pedagogical content knowledge than those who did not. As the study employed a randomized controlled design, the researchers concluded the online professional learning, which was sustained over six weeks, caused an increase in pedagogical content knowledge. Given that a primary goal of StageConnect will be to increase the theater content knowledge in participating teachers, this finding has relevance. This success, however, is not guaranteed. In a study

measuring change in student achievement and educator success, Shaha and Ellsworth (2013) noted that schools with the largest gains had teachers who were more engaged with an online professional learning platform than others. By analyzing duration, frequency, and type of participation using web analytics, the researchers confirmed that engaged teachers led to higher gains in student achievement and measures of educator success (e.g., retention). It is critical, therefore, that StageConnect fosters engagement from participating teachers. Understanding what can lead to teacher engagement with online professional learning, therefore, is paramount.

User experience. In their study of an on-demand professional learning website, Bates, Phalen, and Moran (2017) identified how teachers choose which content to interact with. The studied website offered videos and downloadable documents accompanied by a range of information, including user comments, ratings, grade range, and descriptive text (Bates et al., 2017). Using multiple regression analysis, the researchers determined which of these pieces of information predicted a teacher's choice to engage with the content (Bates et al., 2017). Bates et al. (2017) determined that users considered ratings, perceived utility of the content, and length of descriptive text when deciding whether or not to download or play a resource. As StageConnect will utilize both video and downloadable documents, ensuring that the platform can support user ratings and comments and keeping introductory text brief and accessible will be key. Other research supports Bates et al.'s (2017) finding that teachers select content based on its perceived practicality. In their study of the My Teaching Partner website, which provides video demonstrations of educators teaching the provided curriculum with fidelity, Barton, Whittaker, Kinzie, DeCoster, and Furnari (2017) found that teachers determined which videos to view based on a self-assessment of need. The authors also added that teachers often choose to watch a video based on the introductory text, supporting Bates et al.'s (2017) similar finding. Succinctly

summarizing each StageConnect resource, therefore, may be an important consideration in the development process.

Given the applied nature of theater production, StageConnect will leverage video demonstrations as a primary instructional modality. The literature supports this approach. In a mixed methods study of the My Teaching Partner website, Barton et al. (2017) determined that teachers' use of demonstration videos was positively related to curricular fidelity. For teachers new to a school's nascent theater program, fidelity to the DMIS model—which has been successfully implemented in hundreds of schools—may provide the guardrails necessary for a school's successful theatrical production. Despite the benefits of using video in online professional learning, the medium carries some risk. Barton et al. (2017) noted that videos on the My Teaching Partner site had relatively low usage. Teachers in the study cited a lack of time—a finding of the DMIS needs assessment study—and difficulty relating to the classrooms in the demonstrations as reasons why they did not view videos more frequently. Accordingly, it will be important to keep the videos on the StageConnect platform brief and ensure that the demonstration teachers and students are relatable. Unlike the videos in Barton et al.'s (2017) and Bates et al.'s (2017) research, StageConnect will demonstrate theatrical pedagogical content knowledge. Accordingly, it is important to consider digital instruction in the arts when developing the StageConnect experience.

Digital instruction in the arts. With the movement toward online instruction in higher education, practitioners from many disciplines have adapted pedagogy and content for digital consumption. This process has provided both opportunities and challenges for scholars and practitioners of the arts, where a studio-based heritage and collaborative approach present considerations that may not be as relevant in other disciplines (Cutcher & Cook, 2016). Online

instruction in the arts and arts teaching is still in its infancy, and the supporting literature is scarce. Parrish (2016), however, outlined digital tools for online dance pedagogy. The author noted that social media and discussion boards can be implemented to foster the reflective discourse typical in artistic pedagogy (Parrish, 2016). Parrish (2016) also stated that video conferencing technology has improved in recent years, making it a more reliable tool for dancers and choreographers where synchronicity matters and frozen screens can disrupt the creative and learning processes. Parrish (2016) finally pointed out that video sharing platforms like YouTube have been embraced by the public for informal dance learning. YouTube tutorials on hip hop, for example, have spread it to communities that lack the cultural heritage of the genre and formal training opportunities (Parrish, 2016). These examples indicate that the modalities of online learning can support artistic content and pedagogy.

Similar to other disciplines, however, instructional designers in the arts must consider the bandwidth of students to prioritize areas of instruction. In a participatory action study, Lierse (2015) reflected on the process of developing online music and performing arts teacher preparation courses. The researcher determined that students focused most of their limited time on the portions of the course that were assessed and that students were more likely to engage with non-assessed course content early in the semester before academic pressure kicked in (Lierse, 2015). This aligns with Barton et al.'s (2017) finding that teachers are more likely to view video content in an online professional development website in the early fall. Accordingly, Lierse (2015) moved collaborative group work to the first three weeks of the music education course to capitalize on learner focus. Perhaps more so than the instrumental and vocal music typically taught in schools, theater is a highly collaborative art. Although much of DMIS's collaboration happens during rehearsal, some collaborative planning is necessary outside of the

rehearsal process. StageConnect may be well served by facilitating collaborations related to the development of a strategic plan and the initiation of partnerships, for example, early in the modules when teachers may have more bandwidth to focus on such tasks.

Although it is important to be strategic about DMIS participants' capacity to engage with online learning, the platform will need to embrace the sociocultural nature of theater learning in which the activity system is rooted. This theoretical underpinning is not unique to DMIS, but it is a guiding framework for much of the limited literature on online arts pedagogy. In their study of the development of an online theater course at an Australian university, Philip and Nichols (2007) noted the importance of a sense of ensemble in theater making and instruction. Through participatory action research, the authors developed the course using sociocultural learning theories. By incorporating cognitive presence, social presence, and teaching presence, the researchers built a course implementing tenants of a community of inquiry for digital learning.

This approach of rooting online arts instruction in community is also supported by Cutcher and Cook (2016). Similar to Philip and Nichols (2007), the authors developed two online arts pedagogy courses using a community of inquiry framework. The authors concluded that by incorporating cognitive, social, and teaching presence in course design, online arts education instruction can be as effective as in person models (Cutcher & Cook, 2016). In the case of arts education, however, Cutcher and Cook advocate that instructional designers move beyond a community of inquiry and toward a community of practice. Wegner (1999), who coined the term communities of practice, noted that they comprise groups with a shared interest who develop a community that works toward applied solutions. In school contexts, similar groups are called professional learning communities. Although communities of practice and professional learning communities share many common features, one key distinction is that

professional learning communities focus on teaching and educational contexts (Mraz & Kissel, 2014), whereas communities of practice can be multidisciplinary groups and exist in a variety of organizations (Wegner, 1999). Accordingly, the spirit of Cutcher and Cook's (2016) recommendation could be better operationalized for DMIS, which focuses on the development of teachers in school settings, by embracing digital professional learning communities. Since the DMIS model requires teacher teams to collaborate on producing a piece of musical theater, the teachers gather two or more times weekly to plan and rehearse their shows. The intervention, therefore, could build on this community setting by providing situated and applied professional learning, as well as professional learning community forums.

Digital professional learning communities. Professional learning communities (PLCs) are groups of teachers who gather consistently to improve their skills and pedagogy and, ultimately, improve student outcomes (Mraz & Kissel, 2014). True to their name, PLCs reflect the community of the activity system. Learning Forward's standards for professional learning (2011) value PLCs so much that learning communities are a dedicated standard. In DMIS, teams of three to seven teachers participate in a semester-long professional learning residency during their first year of the program. In future years, however, the teacher teams no longer receive the in-person, tailored professional learning residency. As determined by the needs assessment study, teacher attrition can erode a school's capacity to sustain its new theater program. PLCs could help DMIS teams better sustain their programs by providing continued professional learning and by bringing teachers new to the program up to speed. Key qualities of PLCs are distilled and summarized in Table 3.4.

Table 3.4

Key Qualities of PLCs and Citations

Qualities of PLCs	Citation
PLCs are teacher driven and built on the sharing of expertise	Calvert, 2016
PLCs uphold that all participants have expertise to contribute	Mraz & Kissel, 2014
PLCs are practical working groups	Mraz & Kissel, 2014
PLCs invite teachers to solve problems and become collectively responsible for success	Calvert, 2016
PLCs provide space and time for teachers to discuss, debate, and reflect on problems, content, and pedagogy	Mraz & Kissel, 2014
In PLCs, educators share common goals of student improvement and self-improvement, and are collectively responsible for success	Calvert, 2016
PLCs meet regularly during dedicated time for a sustained duration	Mraz & Kissel, 2014

Online PLCs are becoming more common, with several notable sites dedicated to communities of educators with common goals (Lieberman & Miller, 2014). Lieberman and Miller (2014) cautioned, however, that such communities can be more transactional than collaborative and can lack the context-specific application of true PLCs. When considering interventions, therefore, it is important to avoid pitfalls of the potentially passive online environment and deliberately build the professional learning as an applied experience. As Mraz and Kissel (2014) pointed out, many online professional learning platforms have been successful for schools, especially when access to content specific expertise and coaching is otherwise lacking—as is often the case with DMIS schools. Given the vast DMIS network, an intervention that aims to develop school-based PLCs could also connect such teams to others across the country. The platform could additionally build a school's organizational knowledge. By archiving artifacts like production meeting minutes, costume designs, and staging notes,

StageConnect could preserve a school's capacity to withstand the teacher turnover that can erode program sustainability. When taken as a whole, online learning and online PLCs could provide a powerful tool to address many of the findings of the needs assessment.

Conclusion

A review of the literature confirmed the multidimensional nature of program sustainability and substantiated the need for an equally multidimensional intervention. Activity theory (Engeström, 1987) is a useful theoretical framework for considering interventions. Rooted in sociocultural learning theory, which supports the collaborative and constructive nature of theater making, activity theory considers all of the actors, tools, rules, and norms necessary for a particular outcome (Engeström, 1987). Partnerships, which feature the connection between the activity system's subjects, community, and outcomes, are substantially discussed in the educational literature. Collaborative advantage, goal development, engaging leadership, and using boundary crossing techniques are valuable considerations for the intervention. In researching satisfaction with school resources—the instruments of the activity system—two primary topics were explored. The needs assessment revealed that factors related to human resources and material resources each impact a school's capacity to sustain programming. A review of the literature revealed that professional learning is an effective method for onboarding new staff to a program, defined teacher stress as the disparity between teacher expectations and classroom resources, and identified resource pooling as a potential method for leveraging the materials of the full DMIS network. Finally, the literature on strategic plans—which incorporate all elements of the activity system—identified that deliberate and inclusive goal setting and action planning can foster buy-in and lead to success.

Since schools in the DMIS program are unique institutions with a variety of goals and differing cultures, it is important to develop an intervention that can address all of these topics while allowing the participants to select the supports most useful for their specific needs. StageConnect was thus developed as a digital platform that incorporates best practices in online learning to help schools develop partnerships, create strategic plans, and maximize both human and material resources. Importantly, the platform also endeavors to develop the necessary foundations of theater content knowledge and theater teaching self-efficacy in teachers. By developing a strong user experience, fostering professional learning communities, and deliberately translating arts education to a digital space, StageConnect could supplement the existing DMIS model by responding to the findings of the needs assessment through an on-demand, online experience.

Chapter 4: Intervention Description, Procedure, and Methodology

This chapter begins by building on the literature discussed in Chapter 3 and presenting the StageConnect intervention and its implementation for the study. The chapter then introduces the study's design, including its research questions, theory of treatment, and logic model. Next, both the process and outcome evaluation plans are discussed, followed by the study's methods, including participants, instrumentation, procedures, and analysis plan. The chapter concludes by demonstrating alignment between the research questions, variables of interest, and instrumentation.

DMIS stakeholders reported multiple, complex factors as barriers to theater program sustainability in low SES elementary schools. As discussed in Chapter 2, a needs assessment identified several drivers of this problem, including funding instability, dissatisfaction with school level resources (especially arts professional learning for teachers), and a lack of partnerships and strategic plans. Given the scale of DMIS, which is currently offered in 26 cities in the U.S. and U.K., and given the unique needs of each participating school, addressing just one of the contributing factors would not be sufficient to make meaningful improvement across districts and school teams. The StageConnect platform, therefore, presents a solution that responds to the multifaceted needs of teachers at scale.

StageConnect is an online, on-demand professional learning platform and professional learning community that provides teachers with the resources necessary to sustain their fledgling theater programs. The platform, which was developed by the Education department at Disney Theatrical Group, is built upon an open source learning management system (LMS) called Moodle. This software allows for the customization of the platform to meet DMIS teachers' needs and can be updated and adapted along the way to better meet the needs of participants. To

illustrate the functionality and goals of DMIS: StageConnect, the next section discusses the participant experience.

StageConnect Participant Experience

Participating teachers received a unique login which provided them with free access to the StageConnect platform. Each teacher was assigned a role in the platform that corresponded to their role within the theater program. These roles include: (a) producer, (b) director, (c) choreographer, (d) music director, (e) stage manager, and (f) production manager. The LMS is configured in such a way that users may be assigned more than one role, as teachers often take on multiple jobs in the production (Disney Musicals in Schools, n.d.). Furthermore, the LMS allows users to see only content unique to their assigned roles, which was intended to prevent a more cumbersome user experience. Upon logging into the platform for the first time, participants received an on-screen tour highlighting the organization and functionality of the platform. Because the LMS is highly customizable, this digital tour employed program specific language, rather than potentially confusing LMS terminology.

With production roles distributed among the teacher team, participants were ready to begin. The user experience is illustrated in Figure 4.1. The StageConnect platform features three primary components, each designed to respond to the various findings of the needs assessment. First, all participating teachers took a requisite online course entitled *Fundamentals of Musical Theater*. This course features instructional and demonstration videos, reference materials, and templates to help teachers develop their theater production knowledge and strengthen the foundation of their school's theater program. All participants took this course, in which content does not vary by role.

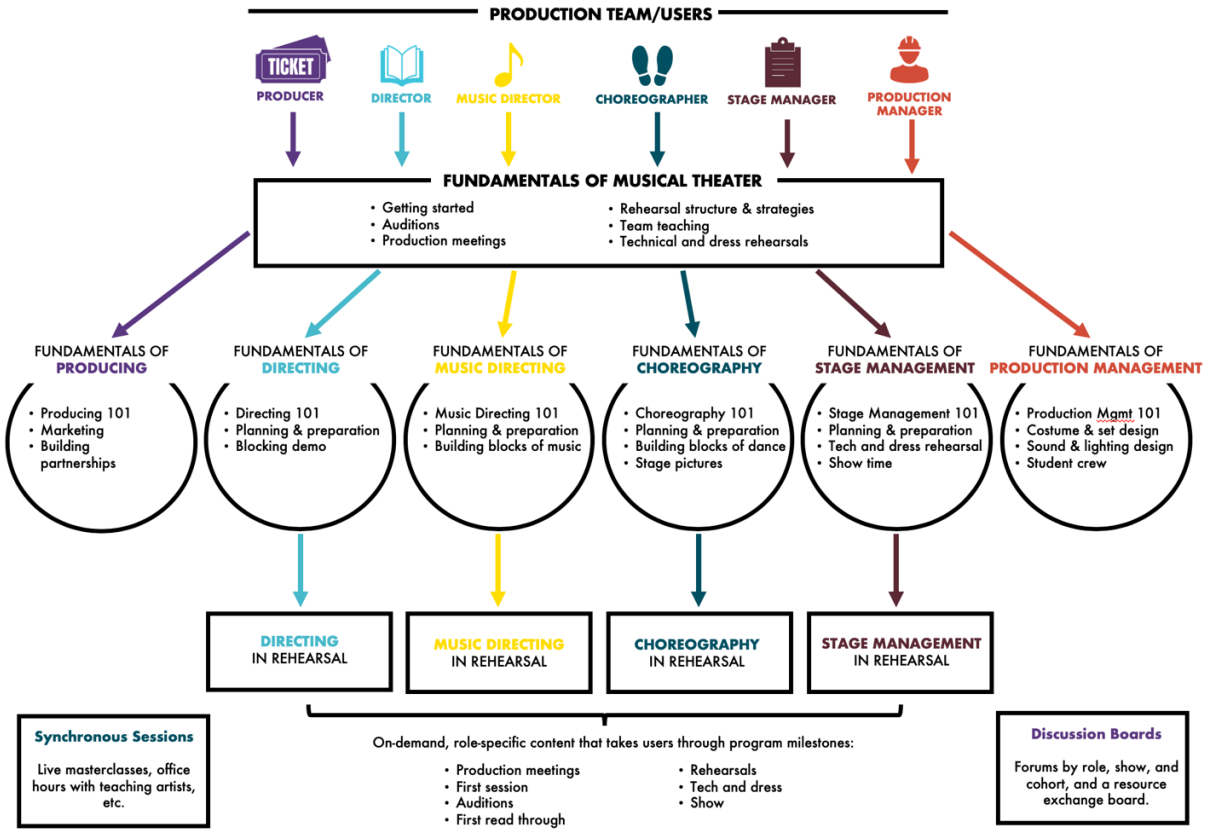

Figure 4.1. The StageConnect participant experience, with examples of course content.

Table 4.1 outlines the *Fundamentals of Musical Theater* course, its related content, and the connections to the needs assessment findings. The *Fundamentals of Musical Theater* course takes approximately one hour to complete and was completed by all participants.

Table 4.1

The Fundamentals of Musical Theater Course Alignment with the Needs Assessment Findings

Platform component	Accessed	Content	Alignment with needs assessment
Fundamentals of musical theater course	Before rehearsals	**Getting Started** • Video overview	Satisfaction with resources (professional learning)
		Production Meetings • Video overview • Production meeting agenda template	Satisfaction with resources

Platform component	Accessed	Content	Alignment with needs assessment
		• Five production meeting agenda examples with associated production milestones	(professional learning); Strategic planning
		Introducing Students to Musical Theater • Video overview • Demonstration video • Lesson plan template • Lesson plan example • Suggested activities resource • Student interest form template	Satisfaction with resources (professional learning)
		Auditions • Demonstration video • Three-line audition technique resource • Audition planning template • Observation notes template • Callbacks lesson plan • Callbacks resource • Casting resource	Satisfaction with resources (professional learning)
		The Read Through • Video overview • Read through rehearsal plan template • Ensemble building activities resource	Satisfaction with resources (professional learning)
		Rehearsal Structure Overview • Video overview • Rehearsal plan example • Rehearsal plan template	Satisfaction with resources (professional learning)
		Rehearsal Strategies • Overview video • Rehearsal strategies resource	Satisfaction with resources (professional learning)
		Team Teaching • Overview video • Team teaching resource	Satisfaction with resources (professional learning)

Platform component	Accessed	Content	Alignment with needs assessment
		Tech, Dress, and Show • Overview video • Technical rehearsal checklist • Dress rehearsal checklist • Opening night checklist	Satisfaction with resources (professional learning)

After completing the *Fundamentals of Musical Theater* course, participants next completed the *Fundamentals of Your Role* course(s). These courses are designed to support participants through their unique role(s) in the production (e.g., *Fundamentals of Directing, Fundamentals of Stage Management*). The courses again feature instructional and demonstration videos, reference materials, and templates, but this time the content varies significantly by role, as the various creative and production disciplines have specific functions in school theater (Disney Musicals in Schools, n.d.). Table 4.2 outlines the six *Fundamentals of Your Role* courses, their related content, and their connections to the needs assessment.

Table 4.2

The Fundamentals of Your Role Course Alignment with the Needs Assessment Findings

Platform component	Accessed	Content	Alignment with needs assessment
Fundamentals of Producing	Before rehearsals	**Producing Overview** • Overview video	Satisfaction with resources (professional learning)
		Community Connections • Overview video • Potential partners template • Partner recruitment email templates • Partner goal setting template • Marketing resources • Program template • Poster template	Satisfaction with resources (professional learning); Partnerships
		Strategic Planning, Fundraising, and Sustainability	Satisfaction with resources

Platform component	Accessed	Content	Alignment with needs assessment
		• Overview video • Strategic plan template • Budget template • Fundraising ideas resource	(professional learning); Strategic planning
Fundamentals of Directing	Before rehearsals	**Directing Overview** • Overview video • Concept guide template	Satisfaction with resources (professional learning)
		Preparation & Planning • Overview video • Show breakdown template • Ground plan template	Satisfaction with resources (professional learning)
		Directing in Practice • Overview video • Blocking demonstration video • Warm ups demonstration video • Acting warmups resource	Satisfaction with resources (professional learning)
Fundamentals of Choreography	Before rehearsals	**Choreography Overview** • Overview video	Satisfaction with resources (professional learning)
		Preparation & Planning • Overview video • Choreography map template	Satisfaction with resources (professional learning)
		Choreography in Practice • Overview video • Building blocks of dance demonstration video • Physical warmups demonstration video • Student devised choreography demonstration video • Building blocks of dance resource • Formations and patterns resource • Student devised choreography resource	Satisfaction with resources (professional learning)

Platform component	Accessed	Content	Alignment with needs assessment
Fundamentals of Music Directing	Before rehearsals	**Music Directing Overview** • Overview video • Music directing basics video • Approaches to music directing resource • Music basics resource	Satisfaction with resources (professional learning)
		Preparation & Planning • Overview video • Score annotation examples	Satisfaction with resources (professional learning)
		Music Directing in Practice • Overview video • Vocal warmups resource	Satisfaction with resources (professional learning)
Fundamentals of Stage Management	Before rehearsals	**Stage Management Overview** • Overview video	Satisfaction with resources (professional learning)
		Preparation & Planning • Overview video • Show breakdown template • Production schedule template • Production schedule tips resource • Production needs template • Rehearsal plan template • Rehearsal report template	Satisfaction with resources (professional learning); Strategic planning
		Stage Management in Practice • Overview video • Technical rehearsal, dress rehearsal, and showtime video	Satisfaction with resources (professional learning)
Fundamentals of Production Management	Before rehearsals	**Production Management Overview** • Overview video • Production timeline template	Satisfaction with resources (professional learning); Strategic planning

Platform component	Accessed	Content	Alignment with needs assessment
		Costume and Prop Design • Overview video • Costume checklist and timeline • Costume tracking template • Costume design template • Prop tracking template	Satisfaction with resources (professional learning)
		Set Design • Overview video • Set checklist and timeline • Set design basics resource • Ground plan template	Satisfaction with resources (professional learning)
		Sound Design • Overview video • Sound checklist and timeline • Sound cue sheet template • Mic plot template • Sound basics resource	Satisfaction with resources (professional learning)
		Lighting Design • Overview video • Light cue sheet template • Lighting basics resource	Satisfaction with resources (professional learning)
		Student Stage Crew • Overview video • Student crew checklist and timeline • Student crew sample lesson plan • Student crew responsibilities resource	Satisfaction with resources (professional learning)

The final primary component of the StageConnect experience was the *In-Rehearsal* section. Whereas the two *Fundamentals* courses follow a sequential structure, the *In-Rehearsal* section is designed as an on-demand experience. The needs assessment revealed that teachers need more support during the rehearsal process. At the same time, participants noted lacking time and exhaustion as barriers to sustainability. Barton et al. (2017) found that teachers were more likely to view online professional learning videos early in the semester when workload was

lighter. Accordingly, the two *Fundamentals* courses are intended to be taken prior to or early in the rehearsal process, with the *In-Rehearsal* section intended as a collection of on-demand videos, resources, and templates to provide support tailored to teachers' specific context and development needs. Because the *In-Rehearsal* section is intended to be used concurrently with the rehearsal process, the platform embraces the applied and situated approaches highlighted in the professional learning (Darling-Hammond et al., 2017; Learning Forward, 2011), online learning (Hargreaves, 2014), adult learning (Knowles, 1984; Mezirow, 1991), and professional learning community (Calvert, 2016; DuFour & Eaker, 2009; Mraz & Kissel, 2014) literature. The *In-Rehearsal* content is again specified by role, although neither the producer nor production manager roles have access to this section, as those functions do not include rehearsal participation in DMIS. Table 4.3 outlines the *In-Rehearsal* content by role and demonstrates connections to the needs assessment findings.

Table 4.3

The In-Rehearsal Components and their Alignment with the Needs Assessment Findings

Platform component	Accessed	Content	Alignment with needs assessment
In-Rehearsal: Director	During rehearsals	Compendium of all role specific videos, resources, and templates, as well as production specific scripts, music tracks, and more.	Satisfaction with resources (professional learning); Strategic planning; Partnerships
In-Rehearsal: Choreographer	During rehearsals	Compendium of all role specific videos, resources, and templates, as well as production specific scripts, music tracks, and more.	Satisfaction with resources (professional learning)

Platform component	Accessed	Content	Alignment with needs assessment
In-Rehearsal: Music Director	During rehearsals	Compendium of all role specific videos, resources, and templates, as well as production specific scripts, music tracks, and more.	Satisfaction with resources (professional learning)
In-Rehearsal: Stage Manager	During rehearsals	Compendium of all role specific videos, resources, and templates, as well as production specific scripts, music tracks, and more.	Satisfaction with resources (professional learning); Strategic planning; Partnerships

Although the *Fundamentals of Musical Theater* course, the *Fundamentals of Your Role* course, and the *In-Rehearsal* section are the primary features of DMIS: StageConnect, the platform includes secondary features that also respond to the needs assessment findings. To foster online professional learning communities within schools and to facilitate the sharing of knowledge and resources across schools, discussion forums provided an opportunity for participants to connect with one another. The LMS allows for various configurations of the discussion boards. Accordingly, participants could connect with their in-school colleagues, teachers from other schools, other teams working on the same show, and people with the same production role. Table 4.4 highlights the discussion board functionality and its connections to the needs assessment findings.

Table 4.4

The Discussion Forums and their Alignment with the Needs Assessment Findings

Platform component	Accessed	Content	Alignment with needs assessment
Discussion forum: by school	During rehearsals	Discussion space for teacher teams	Satisfaction with resources (professional learning); partnerships; strategic planning
Discussion forum: by role	During rehearsals	Discussion space for teachers to connect with educators from other schools who share their production role	Satisfaction with resources (professional learning); partnerships; strategic planning
Discussion forum: by show	During rehearsals	Discussion space for teachers to connect with other schools working on the same show	Satisfaction with resources (professional learning); partnerships; strategic planning
Discussion forum: resource exchange	During rehearsals	Discussion space for teachers from all schools to exchange costumes, sets, props, or share ideas for their creation	Satisfaction with resources (professional learning, production resources); partnerships; strategic planning
Discussion forum: all users	During rehearsals	An open discussion forum for all users	Satisfaction with resources (professional learning); partnerships; strategic planning

In addition to this asynchronous communication forum, StageConnect also has the capacity to host synchronous discussion over video conferencing technology. The LMS allows for universal announcements to all users. Table 4.5 provides an overview of the synchronous meeting capacity and its alignment to the needs assessment findings.

Table 4.5

The Synchronous Components and their Alignment with the Needs Assessment Findings

Platform component	Accessed	Content	Alignment with needs assessment
Synchronous sessions: workshops or masterclasses	During rehearsal	Live video conference professional learning according to participant need, interest, or topic	Satisfaction with resources (professional learning, production resources); Partnerships; Strategic planning
Synchronous sessions: office hours	During rehearsal	Live video conference office hours with Disney teaching artists and education department administrators to answer questions, work through production challenges, develop strategic plans, etc.	Satisfaction with resources (professional learning, production resources); Partnerships; Strategic planning

Given the platform's multifaceted response to the diverse findings of the needs assessment, StageConnect is an empirically grounded intervention designed to improve theater program sustainability in low SES schools. In order to determine whether the intervention improved school theater program sustainability, however, a foundational theory of treatment and corresponding logic model are important.

Theory of Treatment and Logic Model

Developing a theory of treatment can bolster the quality of both the intervention and its evaluation (Leviton & Lipsey, 2007). Treatment theory examines which inputs are theorized to lead to the desired outputs (Leviton & Lipsey, 2007). In addition to providing a theoretical foundation for the intervention, Rossi, Lipsey, and Freeman (2004) note that program theory can facilitate the development of program evaluation. Leviton and Lipsey (2007) present multiple formats for theories of treatment. The causal diagram model illustrates how variables influence one another during the treatment process (Leviton & Lipsey, 2007). As the StageConnect platform is intended to meet the proximal outcomes of the theory of treatment, which in turn are theorized to foster program sustainability, this model is the appropriate format for the intervention. The theory of treatment can be found in Appendix D. Leviton and Lipsey (2007) present four elements of treatment theories: (a) defining the problem and for whom and when it is treatable, (b) detailing the inputs and their relationships, (c) outlining the steps of the change process, and (d) detailing the anticipated output.

Although there are many stakeholders within the DMIS program, the largest areas for improvement are at the school level, situating teachers as the focus of the intervention. As program discontinuation is the problem of practice, intervening in a school's second-or-beyond year of DMIS—when teachers produce theater without the program's teaching artist support—is likely to have the greatest impact. Regarding inputs and their relationships, the intervention is grounded in the empirical data from the needs assessment, which revealed that the multidimensional nature of program sustainability required equally multifaceted improvement solutions. The inputs, therefore, respond to this variety of needs, allowing participants to receive the supports most useful for their own contexts.

The third element of theories of treatment is an outline of the steps of the change process (Leviton & Lipsey, 2007). The theory of treatment (Appendix D) illustrates the short-term and intermediate outcomes, which are sequential in nature. Here, the causal nature of the theory of treatment becomes clear. By rooting the intervention in the literature, and by theorizing linked short-term and intermediate outcomes, the theory is grounded in evidence. In order to make inferences, however, it is important to operationalize the constructs within the outcomes (Leviton & Lipsey, 2007). These mediating variables allow the researcher to identify the appropriate evaluation instrumentation. As illustrated in Appendix D, the mediating variables within the StageConnect theory of treatment include several constructs, ranging from content knowledge, to teacher theater self-efficacy, to perceptions of partnership and strategic plan strength, and finally to the development of a program mission and goals. These constructs are supported in the literature and measurable with extant instruments, pre- and posttest content knowledge assessments, and focus group interviews. If the intervention is successful in achieving the short- and intermediate-term goals, then the theory of treatment suggests that the long-term outcome—sustained school theater programs—should follow. This is the last of Leviton and Lipsey's (2007) elements of a theory of treatment, and it is illustrated in the StageConnect theory of treatment (Appendix D). Thus, the theory of treatment supports an empirically and theoretically backed intervention that responds to the problem of practice. Although the theory of treatment grounds the intervention in the literature and sets the stage for evaluation, a more detailed plan was necessary for implementation.

Whereas the theory of treatment provides the hypothesized cause and effect of an intervention, a logic model illustrates the supporting resources, strategies, and activities necessary to implement it and achieve the proposed outcome (McLaughlin & Jordan, 2010). The

logic model for the StageConnect intervention can be found in Appendix E. The inputs section captures the resources that were necessary within the intervention. As StageConnect is a new product, funding was necessary to develop the learning management system and all supporting content. The education department at Disney Theatrical Group also committed substantial time to the development of the learning content. Finally, the teachers participated in an orientation meeting and used computers and internet access throughout the intervention.

The outputs detailed in the logic model (Appendix E) include both the activities of the intervention and specifications of the intended participants. Since DMIS aims to seed ongoing theater programs, the teacher participants had completed the program's first-year teaching artist residency and were producing a show without external support. Six schools across three districts participated in the intervention. Just as a theory of treatment must be grounded in the literature, aligning program activities with the literature also improves the quality of the intervention. For example, Wever-Frerichs et al. (2018) found that online professional learning was successful when applied to a situated context. As such, teachers participated in the professional learning just before and during their rehearsal process, allowing for real-time application. Similarly, the discussion forums are also supported by the literature (Mraz & Kissel, 2014). Like the theory of treatment, the logic model's impact is discussed across short-, medium-, and long-term outcomes. These outcomes are sequential. For example, in order to develop the medium-term outcome of more advanced theater making and teaching skills, teachers must first achieve the short-term outcomes of increased theater content knowledge and increased self-efficacy. Bandura (1977) notes that mastery experience is a driving factor in the development of self-efficacy. As the professional learning is applied in rehearsal, the intervention fosters such mastery, illustrating the scaffolded nature of the logic model and its connection to the theoretical literature. The

research questions must also align with the theory of treatment and logic model as they seek to understand both the process of the intervention and its proximal outcomes.

Research Questions

The purpose of this study is to evaluate the impact of StageConnect on teachers' capacities to sustain their fledgling theater programs. Because this research examines both processes and outcomes, the research questions reflect both points of evaluation. The process evaluation research questions are:

- RQ1: Are the teachers using StageConnect receiving the specified amount, type, and quality of professional learning and programmatic support through the platform?
- RQ2: How do the teachers using StageConnect apply the professional learning, tools, and templates provided through the platform to their rehearsal process?
- RQ3: What are participants' perceptions of the StageConnect platform's usability?

The outcome evaluation research questions are:

- RQ4: What are the differences between teachers' pre- and post-intervention theater content knowledge?
- RQ5: What are the differences between teachers' pre- and post-intervention theater teaching self-efficacy?
- RQ6: What are the differences between teachers' pre- and post-intervention program sustainability skills?
    - RQ6a: What are the differences between teachers' pre- and post-intervention partnership skills and perceptions?
    - RQ6b: What are the differences between teachers' pre- and post-intervention theater program mission and goals?

    - RQ6c: How does the platform help participants maximize resources, including production resources and community resources?
- RQ7: What is the relationship between teachers' sense of theater self-efficacy, theater content knowledge, and teachers' program sustainability skills?

Research Design

This mixed-methods study employed a quasi-experimental, one group, pretest/posttest design coupled with a convergent parallel design. Mixed-methods research combines both quantitative and qualitative data and can provide a deeper understanding than a single methodology (Lochmiller & Lester, 2017). Accordingly, the mixed-methods design provided a comprehensive understanding of the impact of StageConnect on participating teachers. The convergent parallel design allowed for both quantitative and qualitative data to be collected throughout the intervention, before being compared and combined during analysis (Lochmiller & Lester, 2017). Quantitative data was collected through pre- and posttest knowledge assessments, LMS usage data, and surveys. Qualitative data was collected via participant focus groups.

In quasi-experimental designs, causation cannot be definitively concluded due to the myriad of factors that may influence or confound the intervention's results (Rossi et al., 2004; Shadish et al., 2002). Accordingly, researchers must identify measurable variables based on the literature-supported theory of treatment (Rossi et al., 2004). This way, the researcher can more confidently state that the outcomes were likely a result of the intervention. In order to do so, however, the intervention must be implemented with fidelity to the theory of treatment and logic model. Therefore, evaluating the process of the intervention is as important as evaluating its outcomes.

Process Evaluation Indicators

Process evaluations ascertain how faithfully a program is being implemented (Rossi et al., 2004). Such an endeavor is particularly useful in educational environments, in which a social context may influence the fidelity of implementation. Zhang et al. (2011) noted that process evaluations occur during the implementation phase of the studied program and evaluate if and how the intervention's activities are taking place. Given the intervention's process research questions, four evaluation components are particularly relevant. They are: (a) project implementation (Stufflebeam, 2003; Zhang et al., 2011), (b) context (Baranowski & Stables, 2000), (c) participant responsiveness (Dusenbury, Branigan, Falco, & Hansen, 2003), and (d) dosage (Dusenbury et al., 2003). Table 4.8 (p. 196) details which process evaluation indicators are associated with each research question. This section discusses each of these components as they relate to the StageConnect intervention and the research questions.

Project implementation. The project implementation component of an evaluation examines if, and how, the project is being executed (Stufflebeam, 2003; Zhang et al., 2011) and is therefore important in examining RQ1. As the intervention is a self-guided online experience, there is no live facilitation between the platform's designers and its users. Although this allows for quality control of the content, it also puts the onus of implementation fully on the participating teachers. Accordingly, teacher usage of the platform will be used to assess project implementation. This component of the evaluation was quantitative, with usage report data pulled from the platform's LMS. The project implementation indicators are captured in the output activities section of the logic model (Appendix E) and the intervention section of the theory of treatment (Appendix D). While it was important to assess use, this component of the StageConnect evaluation does not consider participant experience.

Context. For a thorough process evaluation, it was important to understand teachers' experiences with the StageConnect platform. Baranowski and Stables (2000) noted that context is a component of process evaluation that assesses the environmental aspects of the program. Since StageConnect is a digital experience, the environment is the online space developed for the platform. Participant experience was the most foundational aspect to evaluate within this component, and shed light on RQ2 and RQ3. By understanding teachers' ease of use of the LMS and the organization of its content, the context component illuminated how user friendly the platform is. As Baranowski and Stables (2000) noted, however, the social environment must also be considered when evaluating context. Accordingly, it was important to assess teachers' experiences with the community forums provided through the platform. Mixed methods were employed for the context component. The system usability scale (SUS; Brooke, 1996) combined with focus group interviews provided important contextual data. The context components are associated with the activities section of the logic model (Appendix E) and the intervention section of the theory of treatment (Appendix D). Beyond the environmental context of the intervention, however, it was also important to understand the responsiveness of the participating teachers.

Participant responsiveness. Participant responsiveness in an aspect of fidelity of implementation explored by Dusenbury et al. (2003). The authors explained that participant responsiveness components evaluate "the extent to which the participants are engaged by and involved in the activities and content of the program" (p. 244). This component was useful for examining RQ1, RQ2, and RQ3. Although full school team participation in the platform was the ideal, the needs assessment revealed that it is not uncommon for a key teacher or two to be a driving force in each school. Accordingly, the participant responsiveness component of the

evaluation assessed whether at least two teachers from each school team completed the two *Fundamentals* courses and accessed the on-demand professional learning from the *In-Rehearsal* section. As the StageConnect intervention presents a variety of material across modalities new to the program (e.g., video instruction and demonstrations, templates), it was as important that the process evaluation explored how the teachers responded to the content as it was to evaluate if they used it. This component leveraged a mixed methods approach. Quantitative data from the LMS indicated which teachers visited the platform and engaged with its resources. Qualitative data from focus group interviews illuminated whether the participants thought the platform was engaging and useful. The participant responsiveness components are associated with the output activities of the logic model (Appendix E) and the intervention section of the theory of treatment (Appendix D).

Dosage. The dosage component of process evaluation concerns the "amount of program content received by the participants" (Dusenbury et al., 2003, p. 241) and was useful for responding to RQ1 and RQ2. The StageConnect intervention was delivered in three parts—two requisite *Fundamentals* courses and one on-demand *In-Rehearsal* section. The platform also provided community forums for participants to share resources and ask questions and included the potential for synchronous webinars. The experience, therefore, included both required content and optional content for participants to engage with as their needs and interest dictated. Because of these varying parameters, a clear dosage plan was essential for the process evaluation. As discussed previously, fidelity of implementation required at least two members of each school team to fully complete the two *Fundamentals* courses and regularly access the *In-Rehearsal* content. Regular access was operationalized as participants using at least half of the section's resources, or visiting the *In-Rehearsal* section of the platform throughout the rehearsal

process. This quantitative data was captured in the LMS's usage reports. The dosage components are reflected in the outputs sections of the logic model (Appendix E) and the intervention section of the theory of treatment (Appendix D). By evaluating the dosage, participant responsiveness, context, and implementation, the intervention's fidelity of implementation was illuminated. Taken together, these components indicated the fidelity with which the intervention was implemented. Assessing fidelity is important, as programs implemented according to a logic model and theory of treatment can more confidently be inferred as causes of programmatic effects, which are measured through outcome evaluations.

Outcome Evaluation Indicators

The goal of an intervention is to initiate a change that results in improvement (Rossi et al., 2004). Whereas process evaluations examine whether the intervention was implemented with fidelity to the theory of treatment and logic model, outcome evaluations examine the results of the intervention. Although the StageConnect intervention's ultimate impact would take years to study, this portion of the evaluation focuses on the theory of treatment and logic model's proximal outcomes. By evaluating these mediating variables, an early picture emerged as to the platform's capacity to help teachers sustain their theater programs. The study employed pre- and posttest measures, including content knowledge assessments, as well as self-efficacy, partnership, and strategic planning sub-scales. Focus group interviews additionally provided pre- and post-intervention qualitative data on teachers' perceptions of, and capacity to, sustain their theater programs. The outcome evaluation indicators are intended to explore RQ4, RQ5, RQ6, and RQ7, which are summarized in Table 4.8 (p. 196).

Methods

This section discusses the study's methods. It begins with an introduction to the participants, site identification, and sampling methodology before discussing the instrumentation, variables, data sources, and instrument design. Finally, this section discusses the study's procedures, including the intervention timeline and processes, data collection procedures, and data analysis plans.

Participants

DMIS is offered through partnerships with performing arts organizations in 26 markets across the U.S. and U.K. Since the POP explores the lack of theater programs in low SES schools domestically, the study will focus on three participating districts in the U.S. Program A and program B are the same districts that participated in the needs assessment. As discussed in Chapter 2, these districts were selected due to their tenure in the DMIS program, their representative demographics, and their program sustainability rates, with program A having median sustainability rates across all DMIS sites, and program B having an impressive 100% sustainability rate. For the study, a third district, program C, was added. Program C is offered in a large Southwestern U.S. city and has been operating the program for several years. As a result, the program works with schools in a variety of year cohorts and has lower sustainability rates than Program A. Program C is offered through a large performing arts center with more than $26,000,000 in annual revenue (GuideStar, n.d.). The center opened in 2012 and began offering the DMIS program one year later. This third site was added to increase the sample size of the study. Table 4.6 details each program's sustainability rates.

Table 4.6

School Sustainability Rates by Cohort Year

Program	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
Program A	95%	88%	63%	33%	27%	44%	25%
Program B	100%	100%	100%	TBD	TBD	TBD	TBD
Program C	97%	88%	44%	17%	17%	TBD	TBD

Note: Table 4.6 illustrates the percentage of schools that continue producing theater in the years following their initial participation in the DMIS program. Program A began programming in the 2012 school year, Program B began in the 2015 school year, and Program C in the 2013 school year, explaining the varying amounts of data available for each program (Disney Musicals in Schools, n.d.).

Participants within these districts were elementary school teachers in schools that had completed at least one year of the DMIS program. As the data reveals that schools face their biggest threats to sustainability in the years following their initial DMIS residency, a school's second year or beyond was the appropriate moment for intervention. The sample of participating schools spanned a variety of cohorts, ranging from second to fifth year participants. To select schools for the study, program managers in each market recommended schools that met the selection criteria. In addition to recommending year two and beyond schools, the program managers were tasked with recommending schools representing a spectrum of perceived program strength. Thus, the study employed purposive sampling. Purposive sampling is a non-probability sampling approach in which participants are selected based on certain criteria (Lochmiller & Lester, 2018). Although purposive sampling can lead to biases and challenges with generalizability (Pettus-Davis et al., 2011), the applied nature of the research warrants such an approach. By selecting schools from a variety of cohorts and perceived program strengths, the

study gauged the intervention's capacity to improve sustainability in many contexts and was designed to allow schools to learn from others with different experience levels or expertise.

Once schools were selected and all necessary IRB approvals were secured, teachers were recruited for the study. DMIS requires teachers to work in teams of three or more to produce the school musical. Although ideally the full teacher team from each school would have signed on for the study, fidelity of implementation required a minimum participation of two teachers from each team, as the needs assessment and anecdotal evidence suggest that a reduced team of two are commonly a driving force of the program in schools. Since DMIS tracks with a school and not with individual teachers, some of the participating teachers were not involved in the school's initial DMIS teaching artist residency. Given that the needs assessment revealed that teacher turnover and its effects are barriers to sustainability, and given that one of the primary goals of StageConnect is to provide theater content knowledge for teachers new to the program, involving such teachers was a strong test of intervention efficacy. Ideally, two to four schools were to participate in each district, for a total of approximately 6-12 schools, and a total teacher sample size of approximately 35. Given the study's pretest/posttest design, a Wilcoxon Signed Rank test determined the change between evaluation assessments. Although a power analysis called for a minimum sample size of 34, ultimately 11 teachers were recruited for the study. This limits the study's statistical validity, which refers to the validity of the findings based on the statistical power, effect size, and sample size (Shadish et al., 2002).

Instrumentation

The study employed both process and outcome evaluations, and, as such, utilized several instruments. The process evaluation included LMS usage report data, the system usability scale (Brooke, 1996), and focus group interviews. The pre- and posttest components of the outcome

evaluation included a researcher-developed content knowledge assessment, a teacher theater self-efficacy scale, a partnership subscale, a strategic planning subscale, and focus group interviews. This section presents the total instrumentation for the StageConnect intervention study, which are also summarized in a matrix at the end of this chapter (Table 4.8).

Process evaluation instruments. It was important for coherence and quality that the process evaluation's indicators aligned to the research questions, process evaluation components, and specific data collection tools (Rossi et al., 2004). The process evaluation used a mixed methods approach, with the quantitative data originating from LMS analytics and a survey, and the qualitative data generated through participant focus groups.

LMS analytics. As RQ1 examines participants' usage of the platform, data on site visits and engagement was necessary. One of the advantages of using an LMS to deliver the professional learning and supporting resources was the analytics such a system affords. These analytics were leveraged frequently in the process evaluation to give a clear and bias-free indication of the intervention's implementation. One indicator that evaluated both the project implementation and dose components was participants' completion of the two *Fundamentals* courses and regular access to the *In-Rehearsal* supports. The LMS user logs and usage reports identified which participants were accessing the content and the frequency with which they did so. The LMS analytics were also employed to evaluate an indicator within the participant responsiveness component. By identifying which videos were viewed and which tools were downloaded, a picture emerged as to the level of engagement with the platform. Although useful for the foundation of the process evaluation, LMS data alone is insufficient as it does not include participant voice.

Focus groups. Understanding the experience of teachers using the tool was vital for both the evaluation and the iterative improvement of the StageConnect platform. Accordingly, semi-structured participant focus groups at key phases of the intervention facilitated the process evaluation, and specifically responded to RQ2 (which explores participant perception) and RQ3 (which explores usability). Participants' reflection on the quality of the platform's content and relevance to their practice were indicators of participant responsiveness. Participant focus groups following the completion of the two *Fundamentals* courses added to this component of the evaluation. These focus groups asked participants to discuss their perceptions of, and satisfaction with, the quality of the professional learning as well as the utility and relevance of the supporting materials. The mid-point focus group also evaluated indicators related to the context component of the evaluation by specifically examining the online environment, its user experience, and the community elements (e.g., discussion forums). A final focus group, which took place at the end of the intervention, contributed further to the participant responsiveness component of the evaluation. This final focus group again assessed participants' perception of, and satisfaction with, the system's content, but took place after teachers had experienced the full platform. Appendix F details these semi-structured protocols, and also includes the outcome evaluation focus group questions (including a pre-intervention focus group and outcome questions in the final focus group, which will be discussed shortly).

System usability scale. Because the context component of the process evaluation is informed exclusively by the online environment of the StageConnect platform, and due to limited literature on online arts professional learning, it was critical to examine the user experience. Although the focus groups provided valuable qualitative data on the user experience, gathering quantitative data triangulated the findings and provided a detailed account of the

platform's strengths and weaknesses. Developed by Brooke (1996), the SUS is a well cited instrument that assesses the user interface of a variety of systems. As such, this instrument shed light on RQ3, which explores participants' perceptions of the usability of the platform. The scale was administered in its entirety, with slight adjustments to the language to better specify the StageConnect intervention. This ten-item scale is valued for its validity, reliability (Cronbach's alpha = .91), strength with small sample sizes, and brevity (Sauro, 2011). Furthermore, Orfanou, Tselios, and Katsanos (2015) used the SUS to evaluate the usability of the LMS on which StageConnect is built (Moodle). The authors determined the SUS has strong validity and reliability for evaluating the LMS usability, and further confirmed its particular strength with small sample sizes. The SUS, therefore, is an appropriate tool for evaluating user experience with the StageConnect platform. Appendix G includes the SUS.

Outcome evaluation instruments. The objectives of the StageConnect intervention were to (a) help participants grow their theater production knowledge and capacity by providing professional learning, templates, and resources, (b) help participants improve their theater teaching self-efficacy, and (c) help participants sustain their theater programs by providing professional learning, resources, guidance on developing partnerships and a strategic plan, and discussions with an online professional learning community. The hypotheses, therefore, were:

- H1: A Wilcoxon Signed Rank test will show a significant increase in teacher's theater production knowledge as measured by a content knowledge assessment after participating in DMIS: StageConnect.
- H2: A Wilcoxon Signed Rank test will show a significant increase in teachers' theater self-efficacy as measured by a teacher theater self-efficacy scale after participating in DMIS: StageConnect.

- H3: Mixed-methods analysis (including Wilcoxon Signed Rank tests and focus groups) will reveal that teachers are better able to sustain their theater programs after participating in DMIS: StageConnect. Specifically,
    - H3a: A Wilcoxon Signed Rank test will show a significant improvement in teachers' perceptions about partnerships, as measured by a partnerships subscale.
    - H3b: A Wilcoxon Signed Rank test will show a significant improvement in teachers' perceptions about their program's strategic plan, as measured by a strategic planning subscale. Emergent coding of focus group data will also reveal an improvement of teacher's capacities to articulate their theater program's goals and mission.
    - H3c: Emergent coding of focus group data will reveal an improvement in teachers' capacities to maximize resources, including production resources and community resources.

These multifaceted objectives were developed based on the findings of the needs assessment, are reflected in the outcome evaluation research questions, and align with the logic model and theory of treatment.

Content knowledge assessment. A simple content knowledge assessment provided benchmark data in the pretest. When repeated in the posttest, this data indicated the change in participants' theater content knowledge. This researcher-developed assessment evaluated participants' prior knowledge and retention of the StageConnect platform's content (Appendix H) and therefore responds to RQ4 by testing H1. Although a researcher-developed assessment has limitations in terms of validity and reliability, several measures strengthened the instrument. First, cognitive interviews were conducted to improve validity. Next, triangulation with the

qualitative data increased validity. Because the professional learning in StageConnect is customized according to users' production roles, participants only took the assessments relative to their role as well as the content related to the *Fundamentals of Musical Theater* course, which all users must take. This 10-item content knowledge assessment was administered through Qualtrics, and participants were prompted to take it before and after the six-month intervention. Participants enrolled in more than one *Fundamentals of Your Role* course had an additional four items on the assessment per-role.

Teacher theater self-efficacy scale. Self-efficacy is a person's belief in his or her capacity to succeed at something (Bandura, 1977). Self-efficacy is a well-studied construct in education, and teacher self-efficacy, specifically, has been shown to impact teachers' instructional strategies and effectiveness (Gibson & Dembo, 1984). Teacher self-efficacy is a teacher's belief in her capacity to instruct students (Gibson & Dembo, 1984) and has implications for the success of DMIS. As discussed in Chapter 1, teachers who lack training or experience in theater may have low self-efficacy beliefs about teaching theatrical content (Bowie, 2013). Such theater teaching self-efficacy may be necessary when producing a school play. Due to program goals, most teachers in DMIS lack training or experience in theater (Disney Musicals in Schools, n.d.). Although the first year of DMIS provides the professional learning necessary to help teachers start a theater program, by the second year they are on their own. One of the goals of the StageConnect intervention is to improve teachers' theater self-efficacy beliefs through the delivery of professional learning, video instruction, resources, and community connections. Accordingly, a self-efficacy scale was necessary to measure the construct. Such a scale responds to RQ5 by testing H2.

There are many self-efficacy scales based on Bandura's (1977) seminal construct. Given the link between teacher self-efficacy and student achievement (Coladarci, 1992; Gibson & Dembo, 1984; Muijs & Reynolds, 2002), several researchers developed teacher specific self-efficacy scales (Bandura, 2006; Gibson & Dembo, 1984; Tschannen & Hoy, 2001). Such instruments provide prompts specific to the context of teaching and generate valid and reliable data on teachers' beliefs in their capacity to effectively teach. These instruments, however, may be most useful for generalist teachers working in their primary discipline in a K-12 context. Since DMIS teacher teams comprise teachers with a variety of functions at the school, general teacher efficacy scales were insufficient for measuring their theater teaching efficacy. For example, while a DMIS teacher may be a 4th grade special education teacher by day, in the afterschool theater program, this teacher may serve as the choreographer for the 3rd-5th grade production of *The Lion King*. The teacher may have high self-efficacy beliefs in context as a 4th grade special education teacher, but low self-efficacy beliefs when it comes to teaching 60 students to box-step in unison. Accordingly, a more sensitive instrument was necessary to measure DMIS teachers' theater self-efficacy beliefs.

Recognizing a similar need, Yoon and Evans (2012) developed a scale that measures teachers' engineering self-efficacy beliefs. Although theater production and engineering are very different disciplines, the researchers faced a similar challenge. In K-12 settings, engineering is rarely a core subject and is taught by non-specialists who may lack formal engineering training or experience. The authors adapted the teacher self-efficacy instruments developed by Gibson and Dembo (1984), Riggs and Enochs (1990), Tschannen and Hoy (2001), Bandura (2006), and Teo (2009), adding a few original items and adjusting language for discipline specificity and consistency. The resulting 41-item instrument includes subscales on engineering pedagogical

content knowledge self-efficacy, motivational self-efficacy, instructional self-efficacy, student engagement self-efficacy, disciplinary self-efficacy, and outcome expectancy self-efficacy. Although the original instrument featured a five-point Likert-type scale, the response options were adapted to align with the other scales used for consistency. Dawes (2008) determined five- and seven-point scales yielded equivalent results, suggesting that this change will not impact the scale. The instrument has strong reliability, with an overall Cronbach's alpha of .98 (Yoon & Evans, 2012). This instrument was adapted by adjusting the engineering language to reflect a theatrical context. This 41-item scale was used in its entirety and was combined with the partnership and strategic planning subscales discussed below (Appendix I), administered before and after the intervention.

Partnerships sub-scale. The partnerships subscale from the PSAT (Schell et al., 2013), which served as the basis for the needs assessment questionnaire, was used to evaluate the platform's capacity to help participants initiate or strengthen partnerships. As this was one of the goals of the intervention, measuring teachers' capacity to do so was key and responds to RQ6a by testing H3a. Schell et al. (2013) developed the PSAT through a comprehensive literature review, concept mapping, and expert consultation. Because the original PSAT uses generic language (e.g., "the program plans for future resource needs"), each item was slightly adapted to specify the school's theater program (e.g., "our theater program plans for future resource needs"). Cognitive interviews conducted for the needs assessment revealed that participants may conflate general mention of "the program" with the larger DMIS network. Because the intervention aims to affect change at the school level, this distinction is key. The original PSAT instrument has strong validity and reliability, with an average Cronbach's alpha of .88 (Luke et al., 2014). The partnership subscale reliability is strong, with a Cronbach's alpha of .90. This

five-item scale was used in its entirety, thus preserving validity (Lochmiller & Lester, 2017), and was included in a survey with the teacher theater self-efficacy scale and strategic planning subscale (Appendix I), administered pre and post intervention.

Strategic planning sub scale. Like the partnership subscale, the strategic planning subscale also originated from Schell et al.'s PSAT (2013). The five-item strategic planning subscale includes items assessing financial planning, clarity of program goals, and delineation of responsibilities. This measure assessed whether StageConnect helped participants to lay the foundation of a strategic plan and therefore responds to RQ6b by testing H3b. As with the partnership subscale, the language of the strategic planning subscale was slightly adapted to better specify the school's theater program. The subscale has strong reliability, with a Cronbach's alpha of .88. (Luke et al., 2014). This five-item scale was used in its entirety, thus preserving validity (Lochmiller & Lester, 2017), and was combined with the theater self-efficacy scale and partnerships subscale for the pre/post survey (Appendix I).

Focus group interviews. This final component of the outcome evaluation provided rich, qualitative data. The outcome evaluation focus groups were conducted at two points in the study—before teachers began the StageConnect intervention and after they had concluded using the tool (a third mid-point focus group supports the process evaluation, as previously discussed). The first semi-structured focus group asked participants about their experiences with, and perceptions of, the logic model's proximal outcomes (Appendix F). The final semi-structured focus group took place after participants had concluded their rehearsal process and assessed perceptions of the platform's impact on the variables of interest (Appendix F), including participants' perception of production and community resources. Accordingly, these focus groups respond to RQ6c by informing H3c, and additionally respond to RQ2 and RQ3.

Figure 4.2 illustrates the holistic research design, inclusive of both process and outcome methods, as it relates to the intervention. As illustrated, the pretest, in-process, and posttest components each leverage quantitative and qualitative strands. These details are discussed next.

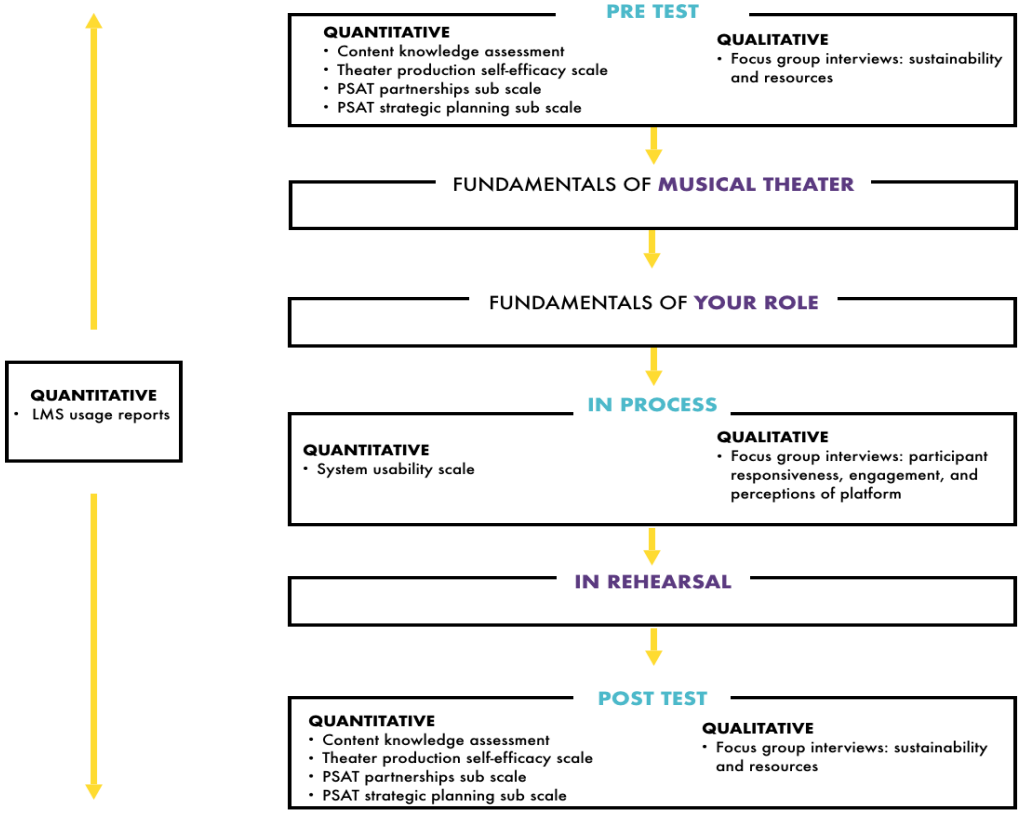

Figure 4.2. The pretest-posttest, convergent parallel design, as it relates to the intervention. Both process and outcome evaluation components are included.

Procedure

The StageConnect intervention was administered in the fall semester of the 2019-2020 school year. As schools typically begin rehearsals in mid-to-late September or early October, participants were recruited in early September. After participants had furnished informed consent, the pretest questionnaire and pretest content knowledge assessment were administered

in September, 2019. During that time, the pre-intervention focus group also took place, and all participants were invited to attend a platform and research orientation via video conference.

After the optional orientation meeting and completing the pretest questionnaire and assessment, participants began the StageConnect intervention. After logging into the system and receiving a digital tour, participants completed the *Fundamentals of Musical Theater* course before completing the *Fundamentals of Your Role* course(s), after which they completed the SUS (Brooke, 1996). After completing the two *Fundamentals* courses, participants were granted access to the on-demand *In-Rehearsal* section. Throughout the intervention, participants had access to community discussion boards and synchronous events. During week six of the of the intervention, the second focus group took place. Participants continued using the platform as needed throughout their rehearsal process. When the schools had concluded their rehearsals, the participants completed the posttest questionnaire and took the posttest content knowledge assessment. The final focus group was also conducted after the conclusion of the rehearsal process. LMS data was gathered regularly throughout the intervention. This timeline is summarized in Table 4.7.

Table 4.7

The Intervention and Research Timeline

Component	Timeline
Optional orientation meeting	Early September, 2019
Pretest: content knowledge assessment, questionnaire, and focus group 1	Mid September, 2019
Participants began intervention (completed *Fundamentals of Musical Theater* and *Fundamentals of Your Role* courses)	Late September – early October, 2019

Component	Timeline
Rehearsals (participants accessed the *In-Rehearsal* content throughout)	October 2019 – March, 2020
Process evaluation: system usability survey and focus group 2	December, 2019
Posttest: content knowledge assessment, questionnaire, and focus group 3	March, 2020

Data collection procedure. The pre- and posttest instrument and the SUS survey (Brooke, 1996) were administered via Qualtrics, an online survey provider. Participants received custom versions of the questionnaire based on their role within the DMIS program. The focus groups were conducted via video conference software. The focus groups were audio recorded to allow for review and transcription. The researcher also took notes throughout the focus groups. The LMS data was gathered regularly throughout the intervention and was monitored for patterns and threats to participant engagement.

All data was stored on a password protected computer within an encrypted disk image requiring a password, accessible only by the researcher. Audio recordings of the focus groups were also stored in this manner. All questionnaires were distributed electronically, using Qualtrics. Participants used their own computers to complete the questionnaires.

Data analysis plan. This section discusses the analysis plan for both the pretest/posttest and the convergent parallel aspects of the design. Both quantitative and qualitative analyses are discussed. For the pretest/posttest component, the quantitative survey data was analyzed using SPSS statistical software. Descriptive statistics indicated the means of each scale or subscale. A Wilcoxon Signed Rank test determined if there were significant differences of means between the pre- and posttest administrations of the survey. The content knowledge assessment was scored and imported into SPSS. The content knowledge assessment data was analyzed in the

same manner as the pretest/posttest survey data. Similarly, the SUS survey data was analyzed using descriptive statistics. Since this measure was an indicator for the process evaluation, descriptive statistics including means and frequencies were sufficient, as the instrument did not measure change. For example, measures of central tendency on the various factors measured by the survey indicated participant's average perceptions. The final component of quantitative data was the LMS usage reports. This data was exported from the LMS and imported into SPSS for descriptive analysis. Given the nature of this data, which described how often and in what manner participants engaged with the site, frequencies were the most useful statistical analysis. Such analysis included which platform components were accessed the most or least, which roles accessed the site most frequently, and how often participants logged on to the site.

The qualitative data originated from the three focus group interviews. From the audio recordings, the data was transcribed verbatim. The transcribed data was then uploaded into Nvivo, qualitative analysis software. The transcripts were read several times, with notations informing the development of codes on each reading. These codes were developed using an iterative process through multiple readings and emergent coding. As Lochmiller and Lester (2017) noted, emergent codes are descriptive in nature and allow the researcher to identify patterns in the data. The codes were then compared and combined into themes, which illustrated the rich, descriptive explanation of the study's process and outcome evaluation questions. The qualitative findings were then sent to the participants for member checking, which improves the trustworthiness of the research (Lochmiller & Lester, 2017). This qualitative analysis responded to both process and outcome research questions. As Creswell and Plano-Clark (2011) noted, however, although the convergent parallel design requires the qualitative and quantitative data to be analyzed separately, they must then be combined for total analysis. The quantitative and

qualitative results, therefore, were compared, contrasted, and ultimately merged. To merge the data, a side by side analysis of the qualitative themes, quantitative LMS data, and survey results indicated how the two research paradigms supported or contradicted the findings of the other. The combined analysis highlighted convergent findings between the qualitative and quantitative strands, and discussed and interpreted any discrepancies.

Conclusion

The StageConnect intervention responded to the findings of the needs assessment. The theory of treatment and logic model present the intervention's process evaluation indicators and proximal outcomes. The study implemented a quasi-experimental pretest/posttest and convergent parallel design to investigate both process and outcome research questions. Table 4.8 presents a summary matrix by research question, demonstrating the alignment between the research questions, instrumentation, data collection, and analysis. If StageConnect was successful in meeting the theorized proximal outcomes, it may be a valuable tool for improving theater program sustainability in low SES elementary schools.

Table 4.8

Research Design Summary Matrix

Research Question	Indicators/ constructs	Data Source	Collection Tool	Frequency	Analysis
RQ1 (process): Are the teachers using StageConnect receiving the proper amount, type, and quality of professional learning and programmatic	Completion rates of the two required *foundations* courses AND regular access of the *in-rehearsal* content.	LMS analytics	Moodle usage logs and reports	Weekly, including the pre-rehearsal content and over the course of the ~17-week rehearsal process	Descriptive statistics

Research Question	Indicators/ constructs	Data Source	Collection Tool	Frequency	Analysis
support through the platform?					
	Participant reflections on quality and relevance	Participants	Focus groups	Once, after participants have completed the fundamentals courses	Emergent coding and thematic analysis
RQ2 (process): Do the teachers using StageConnect apply the professional learning, tools, and templates provided through the platform to their rehearsal process?	Participants reported use and application of supporting resources	Participants	Focus groups	Twice, once after participants have completed the fundamentals course, and once after completing the intervention	Emergent coding and thematic analysis
	Participants reported application of professional learning concepts to their rehearsal process	Participants	Focus groups	Twice, once after participants have completed the fundamentals	Emergent coding and thematic analysis
	Downloaded supporting resources	LMS analytics	Moodle usage logs and reports	Weekly, including the pre-rehearsal content and over the course of the ~17-week rehearsal process	Descriptive and inferential statistics

Research Question	Indicators/ constructs	Data Source	Collection Tool	Frequency	Analysis
RQ3 (process): What are participants' perceptions of the StageConnect platform's usability?	Participant responses to the platform user experience	Participants	SUS (Brooke, 1996)	Once, after participants have completed the fundamentals courses	Descriptive statistics
	Participant perceptions of the professional learning content and supporting resources	Participants	Focus groups	Once, after participants have completed the fundamentals courses	Emergent coding and thematic analysis
RQ4 (outcome): What are the differences between teachers' pre- and post-intervention theater content knowledge?	Theater content knowledge	Participants	Theater content knowledge assessment	Twice, pre and post intervention	Descriptive and inferential statistics
RQ5 (outcome): What are the differences between teachers' pre- and post-intervention theater teaching self-efficacy?	Teacher theater self-efficacy	Participants	Modification of a domain specific teacher self-efficacy scale (Yoon & Evans, 2012)	Twice, pre and post intervention	Descriptive and inferential statistics
RQ6 (outcome): What are the	Program sustainability	Participants	Focus groups	Twice, pre and post intervention	Emergent coding and

Research Question	Indicators/ constructs	Data Source	Collection Tool	Frequency	Analysis
differences between teachers' pre- and post-intervention program sustainability skills?					thematic analysis
RQ6a (outcome): What are the differences between teachers' pre- and post-intervention partnership skills and perceptions?	Partnerships	Participants	Partnerships subscale (Schell et al., 2013)	Twice, pre and post intervention	Descriptive and inferential statistics
RQ6b (outcome): What are the differences between teachers' pre- and post-intervention theater program mission and goals?	Strategic planning	Participants	Strategic planning subscale (Schell et al., 2013)	Twice, pre and post intervention)	Descriptive and inferential statistics
RQ6c (outcome): How does the platform help participants maximize resources, including production resources and	Resources	Participants	Focus groups	Twice, pre and post intervention	Emergent coding and thematic analysis

Research Question	Indicators/ constructs	Data Source	Collection Tool	Frequency	Analysis
community resources?					
RQ7 (outcome): What is the relationship between teachers' sense of theater self-efficacy, theater content knowledge, and teachers' program sustainability skills?	Theater content knowledge, theater teacher self-efficacy, partnerships, strategic planning, resources	Participants	Theater content knowledge assessment; modification of a domain specific teacher self-efficacy scale (Yoon & Evans, 2012); Partnerships subscale (Schell et al., 2013); Strategic planning subscale (Schell et al., 2013); Focus groups	Twice, pre and post intervention	Descriptive and inferential statistics; emergent coding and thematic analysis

StageConnect is an empirically grounded intervention, and the proposed study will examine its capacity to better help teachers sustain theater programs in low SES schools.

Chapter 5: Findings and Discussion

This chapter discusses the results of the StageConnect intervention study, which occurred over a six-month period spanning October, 2019 to March, 2020. The purpose of this study was to evaluate DMIS: StageConnect's capacity to improve the aforementioned theater program sustainability challenges (i.e., partnerships, strategic planning, and resources) and necessary teacher foundations (i.e., theater content knowledge and theater teaching self-efficacy). The following seven research questions guided the analysis of the data:

- RQ1: Are the teachers using StageConnect receiving the proper amount, type, and quality of professional learning and programmatic support through the platform?
- RQ2: Do the teachers using StageConnect apply the professional learning, tools, and templates provided through the platform to their rehearsal process?
- RQ3: What are participants' perceptions of the StageConnect platform's usability?
- RQ4: What are the differences between teachers' pre- and post-intervention theater content knowledge?
- RQ5: What are the differences between teachers' pre- and post-intervention theater teaching self-efficacy?
- RQ6: What are the differences between teachers' pre- and post-intervention program sustainability skills?
    - RQ6a: What are the differences between teachers' pre- and post-intervention partnership skills and perceptions?
    - RQ6b: What are the differences between teachers' pre- and post-intervention theater program mission and goals?

    - RQ6c: How does the platform help participants maximize resources, including production resources and community resources?
- RQ7: What is the relationship between teachers' sense of theater self-efficacy, theater content knowledge, and teachers' program sustainability skills?

In general, the data suggests that StageConnect shows promise in developing teachers' theater content knowledge skills and theater teaching self-efficacy, although iterative improvements to the platform could potentially further improve its content knowledge goals. Participants responded favorably to the quality, type, and amount of professional learning offered through StageConnect, and applied the professional learning to their theater programs, although fidelity of implementation was not always met. Low participation rates and inconsistent participation across school teams warrants additional research, points to refinements for future iterations of the intervention, and illuminates additional underlying factors of the problem of practice. The data illuminate organizational improvements to the platform's content may better benefit teachers. Additionally, participants were satisfied with the usability of StageConnect, which scored very high on the SUS. Due to limited participation—both in terms of participants and in terms of platform feature engagement—more research is necessary to fully understand the capacity of StageConnect to improve program sustainability skills. This chapter begins with a discussion of the findings, organized by research question. Next, implications and limitations are discussed, followed by an exploration of future research needs. The dissertation concludes by reflecting on the problem of practice, the intervention, and the future of theater education in U.S. elementary schools.

Research Question One

This section discusses the analysis and findings of RQ1, which asked: Are the teachers using StageConnect receiving the proper amount, type, and quality of professional learning and programmatic support through the platform? The analysis of this process evaluation question used both quantitative and qualitative data, and the findings are discussed next.

Quantitative Findings

Thirty-eight teachers from seven schools were asked to participate in the study. Ultimately, 20 teachers (53%) across all seven schools (100%) provided informed consent and agreed to participate in the intervention. Of the 20 teachers who provided consent, 11 teachers (55%) from six schools (86%) followed through and participated in the intervention. The total sample size for the study, therefore, was 11 teachers across six schools (one from Program A, one from Program B, and four from Program C). Given that I intended to have a sample size of 35 teachers, this smaller sample of 11 impacted the study's statistical validity. With an effect size of .50 and a sample of 11, the statistical power of the study was .44, which is low.

Usage data from the LMS shed light on whether the participants were receiving the specified amount and type of professional learning and programmatic support through StageConnect. During the approximately six-month intervention timeframe, the StageConnect site was accessed 391 times, for a mean of 35 visits per participant. The mean amount of time spent on the site per-visit was nine minutes, suggesting that participants visited the site frequently and completed its content in small increments.

To achieve fidelity of implementation, at least two teachers from each team to participate in the intervention. Two of the six schools had only one teacher participate, and therefore, fidelity of implementation was only partially met in those two schools. Given the small sample

size and applied nature of the research, however, data from those participants were included in the analysis. As Dusenbury et al. (2003) discussed, the threshold for acceptable fidelity ranges in programs and, given the applied nature of the research, this additional data was valuable. To achieve fidelity of implementation, each participant was required to complete both the *Fundamentals of Musical Theater* course and the *Fundamentals of Your Role* course(s) as well as access the *In-Rehearsal* section of the site (where applicable). Whereas all participants completed the *Fundamentals of Musical Theater* course, fidelity of implementation was again partial for the other two components. Table 5.1 illustrates the fidelity of implementation across all participants.

Table 5.1

Fidelity of Implementation by Participant

Participant / School	Production Role(s)	Completed Fundamentals of Musical Theater?	Completed Fundamentals of Your Role(s)?	Accessed In-Rehearsal section?	Fidelity of Implementation?
1A	Director	Yes	Yes	No	Partial
2A	Stage Manager	Yes	Yes	Yes	Yes
3A	Music Director	Yes	No	No	Partial
1B	Stage Manager	Yes	Yes	No	Partial
1C	Director, Producer, Production Manager	Yes	Yes	Yes	Yes
1D	Director, Choreo., Producer, Stage Manager, Music Director,	Yes	Yes	Yes	Yes

Participant / School	Production Role(s)	Completed Fundamentals of Musical Theater?	Completed Fundamentals of Your Role(s)?	Accessed In-Rehearsal section?	Fidelity of Implementation?
	Production Manager				
2D	Director	Yes	Yes	No	Partial
3D	Production Manager	Yes	Yes	NA	Yes
1E	Choreo., Stage Manager, Producer	Yes	Yes	Yes	Yes
2E	Director	Yes	Yes	Yes	Yes
1F	Director	Yes	No	Yes	Partial

As illustrated in Table 5.1, 100% of participants completed the *Fundamentals of Musical Theater* course. Nine out of 11 (82%) of participants completed their assigned *Fundamentals of Your Role* courses. As several participants took on more than one role in the production, however, this percentage increases when considered by role rather than user. That is, of the 20 assigned *Fundamentals of Your Role* courses (across 11 users), 18 enrollments—or 90%—were completed.

The *In-Rehearsal* section, however, was accessed less frequently. Four of the six production roles (director, music director, choreographer, and stage manager) are active during the rehearsal process and, therefore, have an accompanying *In-Rehearsal* section in the StageConnect platform. The other two roles (producer and production manager) are not active within the rehearsal setting and do not have an *In-Rehearsal* component within the platform. Given that many teachers assumed more than one production role, ten of the 11 participants

could view the *In-Rehearsal* section. Only five participants (50% of those who had access), however, accessed this content during the intervention, suggesting that the *In-Rehearsal* section was either not useful or unnecessary for all teachers. Alternatively, teachers may have lacked the time to reference the section during the busy rehearsal process. The quantitative data, therefore, suggests that all participants received the intended amount and type of professional learning through the *Fundamentals of Musical Theater* course, most (73% of participants) received the intended amount and type of professional learning through the *Fundamentals of Your Role* course, and half (50% of participants with access) received the intended amount and type of professional learning through the *In-Rehearsal* sections. Although the quantitative data from the LMS shed light on the engagement participants had with the StageConnect site, it was insufficient for understanding participants' perceptions about amount, type, and quality of professional learning. Accordingly, qualitative data is also necessary to answer RQ1.

Qualitative Findings

Whereas the LMS data provided a foundational understanding of how participants engaged with the website, the focus groups illuminated participants' perceptions about the amount, type, and quality of professional learning offered through StageConnect. The study featured three focus groups in total: one with a school team before they began rehearsals or started using StageConnect, another with a second school team in the midst of rehearsals and during their use of the platform, and the final with a third team after they had completed the courses in StageConnect and finished producing their show. Focus groups two and three were the most useful for responding to RQ1. An interview with a principal who opted out of using StageConnect after logging on to the site a few times also provided data on RQ1.

Amount of professional learning. Although emergent coding and thematic analysis were used to analyze the holistic data, for RQ1 a priori codes (amount, type, and quality) were most effective for understanding the data given the specified variables in the question. Regarding the amount of professional learning offered through StageConnect, focus group participants responded positively. Between the platform's 79 downloadable resources and 48 videos, there was some concern during development that the content might have been overwhelming for teachers. However, across the board, participants described the content as just the right amount. One participant stated, "I don't feel overwhelmed. Maybe next year I would say 'oh, I wish we had this,' but right now I feel it's helpful for me." Despite the accessible nature of the StageConnect content, participants noted the lack of participation by other members of their team. When taken as a whole, spotty participation across a school team has implications regarding the amount of professional learning delivered. As confirmed by the quantitative data, only one school had full team participation on the platform. Participation ranged from one to three teachers per school. The total production teams at the schools, however, were often larger. One participant expressed frustration that her colleagues chose not to engage with StageConnect. She said,

> It would be much more helpful if everyone was on here, though. And if everyone who had a specific role really got into all this stuff on there for their role. Because there's stuff that we could be doing that we don't know about.

Another participant voiced a similar concern,

> I think all of it was very helpful. It wasn't overwhelming where there was too much information, so that was helpful. I think part of our specific thing is that it would help if all the teachers did go on and do it.

When asked why she thought only two of her five teacher production team opted into StageConnect, the teacher stated, “I think we’re just all kind of stretched a little too thin this year with other obligations with work.” This theme of limited bandwidth emerged throughout the analysis. One principal withdrew from participating in the intervention, citing a lack of time. She wrote,

> It has been impossible for me to find time [for StageConnect] in addition to “principaling”, and doing the music and choreography. I know it would help me, but the time commitment has been too much for me.

The principal agreed to a brief interview to further illuminate this barrier. In the discussion, she expressed the demands placed on teachers as a barrier to engagement with interventions like StageConnect. She said,

> Right now, this teaching world is super overwhelming. I don't know where it is in other parts of the country, but I know in our district, we’re the fifth largest, and you talk about things rocking and rolling here. We got a new superintendent a year and a half ago and it’s just there’s a lot. A lot, a lot for teachers to do. So my number one job is to take things off of teachers’ plates, not put on them.

This perception of “just one more thing to do” is a hurdle StageConnect will need to clear if it is to gain more universal adoption from school teams.

Focus group three illustrated another dynamic that could impact full-team participation. When asked why they thought other members of the team did not elect to participate in StageConnect, the participants echoed the limited time and demands of teachers discussed in other focus groups. The participants elaborated, however, that the three of them served as the theater program’s core group, whereas other teachers involved served in general support roles.

One participant explained, “They probably just said, ‘Well, I'm more here to help when I’m given things to help with. I’m not sure I need those resources.’” The teachers elaborated that they divided what they perceived to be the primary responsibilities among their core group of three (directing, music directing, choreographing, stage managing), and rather than having a dedicated producer or production manager, they instead fulfilled those duties among themselves based on priority, bandwidth, and skill. This finding might explain why many participants expressed confusion when selecting their production roles for StageConnect. The disciplinary boundaries of DMIS—and theater in general—are often adapted by teachers to work within the constraints of school environments.

Barriers to participation, such as time and teachers’ more fluid definitions of theater roles, must be considered when positioning StageConnect for future use. For the educators who did engage with the platform, however, the focus group data suggested the amount of professional learning felt just right, although low participation rates could indicate that the teachers who did not engage with the intervention hold a different opinion on the matter. One reason why those who did participate responded favorably to the amount of content, however, may be StageConnect’s modular design.

Type of professional learning: The modular & asynchronous approach. As detailed in Chapter 4, StageConnect’s courses use a modular design in which content is organized by topic or production phase. Participants enjoyed this format, as it allowed them to complete the courses in small chunks. The focus groups confirmed the quantitative finding that participants logged on frequently and worked through the content in roughly ten-minute increments. Participants expressed that this approach helped StageConnect feel manageable. One participant said, “It wasn't too much because I would just do a little bit at a time, so it wasn't like I had to sit

and do the whole thing right then. That was nice." A participant in focus group three expanded on the benefits of the modular approach, also noting that it facilitated sequential instruction. She said, "The way you had the videos ordered, and those kinds of things, it does kind of give it that step-by-step sequential order for teachers who need that at the very basic level."

Participants also valued the asynchronous nature of StageConnect. Rather than meeting on specified dates and times, participants were free to use the platform whenever it suited them. Across the board, participants stated that this approach helped StageConnect feel convenient. Some participants, however, speculated that a hybrid approach might boost engagement. One teacher stated, "I think it's nice being able to go on when you want for how long you want and do it, but I'm also a very hands-on, in-person person. I learn better doing things." Another ventured that a hybrid in-person/online model might help increase participation, suggesting "If you can get into the school to get them excited about it and then have some online follow up." Such approaches should be considered in the future development of the platform, though on the whole teachers were satisfied with the type of professional learning provided. To fully respond to RQ1, qualitative data on the quality of professional learning was also necessary.

Quality of professional learning. In addition to the favorable perceptions participants had about the amount and type of professional learning, they also responded positively when asked about the quality of the professional learning and materials offered on StageConnect. All focus group participants responded favorably when asked about quality, with several people calling it "very well done." When discussing quality, participants typically framed their responses about the site itself, rather than its andragogical approaches. For example, one participant remarked, "I thought the materials were terrific. They were very well organized and put together in a way that was easily understandable." Participants also commented on the

credibility of the video hosts, who were noted as speaking with authority about both theater and education. One participant said, “I thought the video quality was really great. It was very clear. It was easy to understand. The experts that you had on it did a nice job explaining what they were supposed to explain in each section.” When asked more specifically about the professional learning approaches themselves (rather than just the material content), participants responded favorably— though very generally—about the approaches used. This suggests that participants did not recall the andragogy used in StageConnect, did not notice it, or did not have the specific language to discuss it.

In summary, the analysis for RQ1 found that participants received the right amount of professional learning at the individual level, though low participation led to gaps in the amount of professional learning offered to full school teams, and could also indicate that those who felt the content was too much simply opted out of participating. There may be two reasons for this gap. First, teachers are strapped for time given extreme professional demands. Next, DMIS’s disciplinary boundaries for production manager and producer are not always how teachers in the program divide that work. As a result, some of the StageConnect content designed to improve variables in this study went unused. In addition to the amount of professional learning, RQ1 also enquired about the type and quality of content delivered through the platform. Participants enjoyed the type and quality of the professional learning offered through StageConnect, and some suggestions for hybrid in-person/online approaches should be considered.

Research Question Two

This section discusses the analysis of RQ2, which asked: Do the teachers using StageConnect apply the professional learning, tools, and templates provided through the platform

to their rehearsal process? RQ2 was a process evaluation question, and the answer requires both quantitative and qualitative data.

Quantitative Findings

For the quantitative data, LMS reports on resource downloads were analyzed with descriptive statistics, including measures of central tendency and frequencies. The LMS reports provided information on which users downloaded each of the platform's available resources. Such resources include things like production meeting templates, sample rehearsal schedules, and stage diagrams, which may indicate a participant's desire to apply the material in their practice. Across the *Fundamentals of Musical Theater* course and the six *Fundamentals of Your Role* courses, there are a total of 79 downloadable resources available. The *In-Rehearsal* sections also include downloadable resources, but these items are duplicates of those offered in the *Fundamentals* courses, organized for quick reference. In total, there were 134 files downloaded during the intervention timeframe. Table 5.2 presents the total number of downloadable resources available per-course, the number of downloads initiated during the intervention study, and the percentage of all platform downloads per-course.

Table 5.2

Resource Downloads per Course

Course	Enrolled participants	Available downloadable resources	Completed downloads	Mean downloads per participant	Percentage of all platform downloads
Fundamentals of Musical Theater	11	24	90	8.18	67%
Fundamentals of Directing	6	6	12	2	9.60%

Course	Enrolled participants	Available downloadable resources	Completed downloads	Mean downloads per participant	Percentage of all platform downloads
Fundamentals of Music Directing	2	4	1	0.50	0.70%
Fundamentals of Choreography	2	9	4	2	2.80%
Fundamentals of Stage Management	4	9	11	2.75	7.90%
Fundamentals of Producing	3	9	1	0.33	1.40%
Fundamentals of Production Management	3	18	2	0.67	1.40%
Directing: In-Rehearsal	6	6	0	0	0%
Music Directing: In-Rehearsal	2	4	0	0	0%
Choreography: In-Rehearsal	2	9	2	1	1.40%
Stage Management: In-Rehearsal	4	9	11	2.75	7.7%

Of the 79 available resources, 46 (58%) were downloaded at least once, leaving 33 resources (42%) without any downloads. One explanation for this might be the inconsistent participation rates at the school level. Ideally, each school would have had full participation across the various production roles. All but one school, however, were missing StageConnect participation from one or more production roles. The *Fundamentals of Musical Theater* course, which all participants were required to take, experienced the most downloaded resources,

representing 67% of all downloads. The 11 participants downloaded the 24 available resources 90 times, suggesting that participants downloaded the same resources on multiple occasions. Table 5.2 details the percentage of downloads per-course. The most frequently downloaded resources across StageConnect were the Production Meeting #1 Agenda Template (14 downloads), the Introduction to Musical Theater Lesson Plan Template (11 downloads), the Introduction to Musical Theater Lesson Plan Example (nine downloads), the Student Participation Interest Form (six downloads), and the Production Meeting #3 Agenda Template (six downloads). Each of the other resources had fewer than six downloads, and 33 of the 79 resources were never downloaded. *The Fundamentals of Musical Theater* course yielded the highest average downloads per-teacher (8.18). Across the various production roles, stage managers downloaded resources the most frequently (for a combined average download per-participant of 5.5 when combining the *Fundamentals of Stage Management* and *Stage Manager: In-Rehearsal* data), and producers had the lowest downloads per-participant, with a mean of .33. Notably, some of the downloadable resources were designed to improve participants' partnership skills and strategic planning skills (and specifically, the development of a mission and goals). The resources on building and developing partnerships in the *Fundamentals of Producing* course were not downloaded. Although mission and goal setting are embedded within the platform's most downloaded resource (Production Meeting #1 Agenda Template), the more detailed support offered in *Fundamentals of Producing* was not downloaded. However, both of the associated videos were watched by those enrolled as producers.

StageConnect features 48 instructional and demonstration videos across the site. Although the LMS reports did not include data on video views, YouTube, the player with which the videos were embedded into the LMS, did. During the intervention timeframe the 48 videos

received a total of 309 views. As such, the mean number of views per-participant was 28. Given the distribution of videos across the various courses, this suggests that participants viewed all of the requisite videos for their courses. The YouTube analytics confirm that all videos were viewed during the intervention timeframe. Although the quantitative data alone cannot confirm whether participants applied the downloadable resources or strategies from the videos to their own practice, it is evident that participants downloaded resources and engaged with the videos while on the StageConnect platform. The qualitative data, therefore, was necessary for understanding if and how participants applied the professional learning to their rehearsal process.

Qualitative Findings

Focus groups two and three were valuable in understanding participants' application of the professional learning and accompanying resources to their rehearsals. Through the coding process, themes of application and replication emerged as central to participants' appreciation of, and suggested improvements to, StageConnect.

Application. Many participants found the professional learning relevant to their rehearsal process and spoke about the videos and downloadable resources as useful and timely. One participant shared that she enjoyed being able to apply skills explored in the videos to her rehearsals in real time. This hands-on application helped bridge some of the space between the online environment and the tacit nature of theater production. She said,

> I really like the short videos where it shows the drama leaders and then how they question the kids, and that to me was really helpful because then I could go and do it the next day and kind of bring that in with what play we're doing.

Other teachers also commented that the demonstration videos featuring students were especially helpful for learning rehearsal strategies.

For the resources that they did download, participants also responded favorably. Several participants reported printing copies of the resources and using them during rehearsals. One teacher commented,

> I liked the stuff that helped with auditions, the different cast information, because that helped us a lot with callbacks when we would pull someone out and we're like "I think you might work, but let's try this." So I think that was a big one that helped for sure.

Another participant described using the tools provided in StageConnect to experiment with new approaches for developing a rehearsal schedule.

Although most focus group participants described instances of applying knowledge or tools gained through StageConnect to their rehearsal process, some did not. One teacher, the school's music specialist and the music director for the production, stated she did not apply the techniques or resources offered through the platform. "I did not [apply the content]. As the music director, I just basically taught the songs, and they did the bulk of the work," she remarked, referencing the other members of her team. Another teacher stated that she did apply rehearsal strategies and production approaches featured on StageConnect, but remarked that the content did not seem new to her. She identified that some of the printed materials from the established DMIS program were repurposed for StageConnect. Although StageConnect offers 48 original videos and most of its 79 downloadable resources were developed expressly for the platform, the program's established print materials are also included in digital format. Participants in other focus groups did not comment on this repurposing, suggesting that this teacher had a particularly deep level of engagement with the existing program materials. She did state, however, that she much preferred the digital environment to the printed format she had been using to date. In summary, the qualitative analysis suggested that most participants did apply the tools and content

offered through StageConnect to their process, though, as previously discussed, low participation rates across roles meant that some schools missed out on resources central to the intervention.

Replication. When asked about which resources participants wish StageConnect offered, many spoke about documents and videos that could be replicated in their rehearsal process. Whereas the goals of DMIS include training teachers to become theater artists, many participants were eager for materials that they could simply replicate. A participant in focus group one noted that replicating others' approaches to productions has been a tactic she employed in the past. When asked what she hoped would be included in StageConnect, she said,

> I know when we did *Willy Wonka*, I just looked at Google images of what other people have done because there's a lot in that play. Like, children are exploding. I'm like, "How am I going to do this?" And so I went out and searched for what other people have done. So it'll be nice if it's right there.

This idea of replicable resources—as opposed to resources that only facilitate the teaching of the craft—came up throughout all three focus groups and the interview. The principal who opted out of StageConnect stated that such resources may be more practical for time-strapped educators than videos and templates that attempt to build creative skills. She suggested,

> I think what might be more helpful is to put specific, quick, "I need this," types of things on there. So rather than long videos, if you could just go in there and find on the website, "How do you do the beginning of choreography? Give me opening choreography moves."

The choreography course currently offers videos to help teachers devise their own, original choreography for their production. The principal, however, suggested that choreography that

could be replicated with her cast may be more practical than tutorials on the craft. This speaks to the pull DMIS faces between its mission and the constraints of time.

Many participants suggested that one way to provide this replicable content would be to develop resources specific to the Disney shows produced through the program. One teacher summarized this desire for show-specific content by commenting,

> If there were more things for the different shows that would be amazing. So say this person's doing *Aladdin*, here's a pacing guide to help. Like how many days do you have rehearsal? How long is rehearsal? Just to help guide that, because I spent probably way more time than I should have spent trying to map it out just because it was all new to me. So I think that would be a great thing to kind of add on in the future.

Another teacher suggested a similar idea,

> Like, "Here's the sample schedule for this specific musical. We anticipate that it would take you this long to do this song." Something like that, that would give you a sample that ... I say that specifically for the director because I know that's something that takes her a long time to do. If she could go on there and say, "Oh, boom, this is approximately how long each of these are going to take," then it would be much easier for her.

StageConnect provides guidance and templates for teachers to develop a rehearsal schedule based on their selected show, student population, and production goals, which some participants noted as helpful. It seems, however, that due to the constraints of time, teachers would also appreciate more prescriptive examples for each of the shows available to them. This request for replicable and show-specific content recurred throughout the focus groups and interview. DMIS therefore, faces a philosophical question. If the model is to teach a person to fish, how much of

the work should be created for them? A participant in focus group three, however, considered how replicable resources could serve as a starting point for artistic development. She remarked,

> I think that [replicable resources] would be very beneficial, especially in certain schools that have never done it before or are just getting into it. And then, as they learn, and they use it, they'll learn what works really well, and they can tweak it a little bit. But, I think giving them specifics for that show would be very, very beneficial to many educators.

By capitalizing on StageConnect's capacity to connect educators across schools, the platform could provide a forum for educators to share such revisions with one another. Further, as this teacher noted, participants may be poised to learn the craft (and thus improve the quality and sustainability of their programs) by working off of exemplar materials. By adapting content to serve their needs— rather than building things from scratch—perhaps StageConnect could strike a balance between adding even more to teachers' plates and taking a paint-by-numbers approach to theater production. Although more research would be necessary to understand whether a templatized approach versus an original concept would have an effect on the student experience, the mission of DMIS is to build lasting programs in schools. Application was one theme that surfaced through the qualitative analysis. The other, replication, may be a polarity that guides StageConnect's iterative improvement. Polarities are "interdependent pairs that can support each other in pursuit of a common purpose. They can also undermine each other if seen as an either/or problem to solve" (Kise, 2014, p. 7). The polarity of application/replication was a key finding of the qualitative analysis. To this end, flexible offerings that allow teachers to select the approach most sustainable for their circumstances may be beneficial.

Research Question Three

RQ3 was a process evaluation question, which asked: What are participants' perceptions of the StageConnect platform's usability? Mixed methods were again employed to examine the question.

Quantitative Findings

The quantitative analysis for RQ3 leveraged data collected through the SUS (Brooke, 1996). The 10-item Likert-type scale, which is widely cited in the literature and was used to measure the usability of the StageConnect website, includes specific scoring instructions. The scale results in an initial value ranging from zero to four for each item. To score the SUS, Brooke (1996) states that for each odd numbered item, one should be should subtracted from the participant's score. Each even numbered item's score, on the other hand, should be subtracted from five. The new values are next summed and then multiplied by 2.5. This results in a composite score ranging from zero to 100.

According to Lewis (2018), the mean SUS score, based on decades of administrations across a variety of systems, is 68. Sauro and Lewis (2012, 2016) developed a curved grading system based on over five thousand individual responses to the SUS across hundreds of systems. Sauro and Lewis's (2012, 2016) curved grading scale is presented in Table 5.3.

Table 5.3

The SUS Curved Grading Scale (Sauro & Lewis, 2012, 2016)

SUS Score Range	Grade	Percentile Range
84.1-100	A+	96-100
80.8-84.0	A	90-95
78.9-80.7	A-	85-89
77.2-78.8	B+	80-84
74.1-77.1	B	70-79
72.6-74.0	B-	65-69
71.7-72.5	C+	60-64

65.0-71.0	C	41-59
62.7-64.9	C-	35-40
51.7-62.6	D	15-34
0.0-51.6	F	0-14

StageConnect's total score for the SUS (N=11) was 86. According to Sauro and Lewis's (2012, 2016) curved grading scale, this score can be interpreted as an A+, and in the 98th percentile of all SUS scores. The SUS is known for having strong internal consistency, and the StageConnect administration upheld this reliability with a Cronbach's alpha of .843. It is clear from the SUS results that participants were very satisfied with the usability of the StageConnect platform itself. To fully understand their perceptions of the platform, however, qualitative data was also leveraged.

Qualitative Findings

The qualitative analysis supported and contextualized the quantitative findings. The theme of user-friendliness emerged throughout the focus group and interview data.

User friendliness. Focus group and interview participants validated the results of the SUS. Many participants discussed the intuitive nature of StageConnect, and frequently referred to the platform as "user friendly." One teacher illuminated how this user friendliness facilitated quick participation. She said, "I'd say it's very user friendly and it's something that you don't have to spend a ton of time to understand or get used to. You can be under your feet and going pretty fast." Another confirmed, "You can be great with technology or not so great and you can kind of go on and figure out what you need to figure out, which is nice." Because the website was easy to use and navigate, participants reported being able to explore the content without trouble.

Research Question Four

An outcome evaluation question, RQ4 asked: What are the differences between teachers' pre- and post-intervention theater content knowledge? Quantitative data alone were used to understand the difference in means between pre- and posttest measures. The researcher-developed content knowledge assessment was administered based on participants' roles in the production. All participants received the *Fundamentals of Musical Theater* content knowledge assessment, as all participants were enrolled in that course. Participants additionally received content knowledge assessment questions unique to their assigned role(s) within the production (e.g., director, choreographer). Before analyzing the data, it was checked for normal distribution. A Shapiro-Wilk test of normality revealed that the pre-test data was abnormally distributed (w= .036), and therefore the data did not meet the assumption for a *t*-test. Due to this violation of normality, the Wilcoxon Signed Rank test, a non-parametric test, was used for the analysis. Table 5.4 summarizes the findings of the content knowledge assessments by course, which are discussed next.

Table 5.4

Pre- and Posttest Content Knowledge Means by Course

Course	N	Pretest mean	Posttest mean
Fundamentals of Musical Theater	11	4.98	5.34*
Fundamentals of Directing	6	3.17	2.89
Fundamentals of Choreography	2	2.67	3.38
Fundamentals of Music Directing	2	1.75	2.88
Fundamentals of Stage Management	4	2.25	2.63
Fundamentals of Producing	3	2.81	3.42
Fundamentals of Production Management	3	2.97	3.67

Note. * $p \leq .05$

Quantitative Findings

The content knowledge assessments were scored with a point value of one per question. Given that some questions required multiple selections, partial points were awarded or subtracted based on participants' responses. The total possible score for the *Fundamentals of Musical Theater* course (N=11) assessment was six. The mean pretest administration score for the *Fundamentals of Musical Theater* course assessment was 4.98. The mean posttest administration score was 5.34. Using an alpha of .05, a Wilcoxon Singed Rank test revealed a significant difference between the pre- and posttest administrations of the *Fundamentals of Musical Theater* content knowledge assessment (z = -2.191, p = .028). This suggests that StageConnect was effective at improving teachers foundational content knowledge for musical theater. Effect size demonstrates the magnitude of the change. To calculate effect size for nonparametric tests, the z value is divided by the square root of N, where N is not the sample size, but the number of observations (Fritz, Morris, & Richler, 2012). Using this formula ($r = z \div \sqrt{N}$), r = -0.47, indicating a moderate to large effect size (Fritz et al., 2012).

The role specific assessments, however, painted a different picture. Perhaps due to smaller sub-sample sizes, or due to the previously discussed less frequent completion rates, there were no statistically significant improvements to content knowledge across the production roles. For the directors (n= 6), the maximum possible score was four, again with a maximum value of one point per question. The mean pretest administration score was 3.17 and the mean posttest score was 2.89. Notably, the director subgroup's score went down between administrations. The Wilcoxon test yielded a p value of .357 (z = -.921) suggesting that this decline was insignificant. The choreographers (n= 2) also had a maximum possible score of four. This group experienced an increase between pre- and posttest administrations of the assessment. The pretest

administration mean was 2.67, and the post test was 3.38. Using an alpha of .05, however, the *p* value (.180, *z* = -1.342) indicates a statistically insignificant difference between administrations. The music directors (n= 2) again had a maximum possible score of four. The pretest administration yielded a mean score of 1.75 and the posttest mean was 2.88. The Wilcoxon test yielded a *p* value of .180 (*z* = -1.342), meaning that the difference in administrations was not significant.

For the stage management content knowledge assessment (n= 4), the maximum possible score was again four. The pretest mean was 2.25, and the posttest 2.63. Stage managers experienced an increase between pre- and posttest administrations of the assessment. Given a *p* value of .705 (*z* = -.378), however, a Wilcoxon test revealed that the difference in means was not significant. For the producers (n= 3), the maximum potential score was again four. The pretest mean was 2.81 and the posttest mean was 3.42. A Wilcoxon test suggest this gain is not significant (*p* = .162). Finally, the production managers (n= 3) also had a total possible score of four. The mean pretest score was 2.97 and the mean posttest score was 3.67. Despite this larger increase, a Wilcoxon test yielded a *p* value of .109 (*z* = -1.604), suggesting an insignificant difference between the two administrations of the assessment.

By considering scores at the participant level, the practical significance of the difference in means came into view. Practical significance is the pragmatic difference that treatment makes to individuals, regardless of its statistical significance (Thompson, 2002). Whereas statistical significance demonstrates the reliability of the results, practical significance indicates whether a change occurred, and if that change made a difference to participants (Page, 2014). Although caution should be exercised when considering this more real-world effect, given the small sample size and applied nature of the research, practical significance offers an indication that the

intervention is worthy of future research. Tables 5.5-5.11 detail the pre- and posttest scores by participant, according to assessment type. As noted in the following tables, seven out of 11 participants (64%) improved their *Fundamentals of Musical Theater* scores over the course of the intervention. For the *Fundamentals of Your Role* scores, 13 out of 20 enrollments (65%) improved between the pre- and posttest administrations. Directors demonstrated the least improvement, with only one improved score out of six. Two of the four stage managers (50%) demonstrated an improvement between administrations. For choreographers, music directors, producers, and production managers, however, 100% of participants demonstrated an improvement between pre- and posttest administrations.

Table 5.5

Fundamentals of Musical Theater Pre- and Posttest Content Knowledge Means by Participant

Participant/ School	Pretest: Musical Theater	Posttest: Musical Theater	Difference in Means
1A	5.00	6.00	+ 1.00
2A	4.83	6.00	+ 1.17
3A	5.00	5.42	+ 0.42
1B	5.50	5.50	0.00
1C	4.66	4.33	- 0.33
1D	5.33	5.33	0.00
2D	4.83	5.41	+ 0.58
3D	5.08	5.00	- 0.08
1E	4.83	5.00	+ 0.17
2E	4.66	5.08	+ 0.42
1F	5.08	5.66	+ 0.58

Table 5.6

Fundamentals of Directing Pre- and Posttest Content Knowledge Means by Participant

Participant/ School	Pretest: Directing	Posttest: Directing	Difference in Means
1A	3.00	3.00	0.00
1C	4.00	4.00	0.00

Participant/ School	Pretest: Directing	Posttest: Directing	Difference in Means
1D	3.17	2.67	- 0.50
2D	3.25	3.00	- 0.25
2E	2.75	1.33	- 1.42
1F	2.83	3.33	+ 0.50

Table 5.7

Fundamentals of Choreography Pre- and Posttest Content Knowledge Means by Participant

Participant/ School	Pretest: Choreography	Posttest: Choreography	Difference in Means
1D	3.00	3.75	+ 0.75
1E	2.33	3.00	+ 0.67

Table 5.8

Fundamentals of Music Directing Pre- and Posttest Content Knowledge Means by Participant

Participant/ School	Pretest: Music Directing	Posttest: Music Directing	Difference in Means
3A	2.00	3.5	+ 1.5
1D	1.50	2.25	+ 0.75

Table 5.9

Fundamentals of Stage Management Pre- and Posttest Content Knowledge Means by Participant

Participant/ School	Pretest: Stage Management	Posttest: Stage Management	Difference in Means
2A	3.00	3.50	+ 0.50
1B	2.50	2.00	- 0.50
1D	2.50	2.00	- 0.50
1E	1.00	3.00	+ 2.00

Table 5.10

Fundamentals of Producing Pre- and Posttest Content Knowledge Means by Participant

Participant/ School	Pretest: Producing	Posttest: Producing	Difference in Means
1C	2.00	2.75	+ 0.75
1D	3.33	3.75	+ 0.42
1E	2.58	3.75	+ 1.17

Table 5.11

Fundamentals of Production Management Pre- and Posttest Content Knowledge Means by Participant

Participant/ School	Pretest: Production Management	Posttest: Production Management	Difference in Means
1C	3.00	4.00	+ 1.00
1D	2.50	4.00	+ 1.5
3D	2.75	3.00	+ 0.25

In summary, there was a statistically significant difference between pre- and posttest means on the *Fundamentals of Musical Theater* course content knowledge assessment, suggesting that StageConnect was effective in building teachers' foundational theater content knowledge. Although all but one production role demonstrated an increase in content knowledge between administrations, the differences were not statistically significant. When considering practical significance, however, participants in all roles except directing demonstrated improvement. H1 (p. 186), therefore, which posited there would be a statistically significant difference in means between teachers pre- and post-content knowledge assessment, was partially confirmed. There was a statistically significant improvement between pre- and post-administrations for the plenary *Fundamentals of Musical Theater* course. Perhaps due to very small subsample sizes, however, role-specific courses did not demonstrate statistical

significance, although a practical improvement was achieved with five of six roles. Future improvements should focus on the directing course and its assessment.

Research Question Five

RQ5 was also an outcome evaluation question, which asked: What are the differences between teachers' pre- and post-intervention theater teaching self-efficacy beliefs? Given the nature of the question, quantitative analysis was the most appropriate method. For consistency in the analysis and, due to the small sample size, Wilcoxon Signed Rank tests were again employed.

Quantitative Findings

As discussed in Chapter 4, the self-efficacy scale comprised subscales measuring pedagogical content knowledge self-efficacy, motivational self-efficacy, instructional self-efficacy, engagement self-efficacy, disciplinary self-efficacy, and outcome expectancy self-efficacy. The instrument featured a seven-point Likert-type scale which was administered pre- and post-intervention. Table 5.12 summarizes the findings from the self-efficacy scale.

Table 5.12

Pre- and Posttest Self-Efficacy Means

Scale	Pretest mean	Posttest mean
Total self-efficacy scale	4.88	5.45*
Content knowledge self-efficacy sub-scale	4.25	5.41*
Motivational self-efficacy sub-scale	4.94	5.33
Instructional self-efficacy sub-scale	4.35	5.02*
Engagement self-efficacy sub-scale	5.45	5.86
Disciplinary self-efficacy sub-scale	5.64	5.79
Outcome expectancy self-efficacy sub-scale	4.68	5.27

Note. * $p \leq .05$

For the total scale (N=11), the pretest mean was 4.88 and the posttest mean was 5.45. A Wilcoxon test yielded a p-value of .041 ($z = -2.045$), suggesting there was a statistically significant difference between the pre- and posttests results. The effect size of -0.44 is moderate

to large. A closer look, however, reveals that this improvement was most notable in the content knowledge self-efficacy and the instructional self-efficacy subscales. Whereas all subscales experienced an increase between pre- and posttest administrations, the results for these two demonstrated a statistically significant change. For the content knowledge subscale, the pretest mean was 4.25 and the posttest mean was 5.45. A Wilcoxon test yielded a statistically significant *p* value of .013 (z= -2.495). The effect size for the pedagogical content knowledge subscale was -0.53, indicating a large magnitude of change. The instructional self-efficacy subscale had a pretest mean of 4.35 and a posttest mean of 5.02. The Wilcoxon test yielded a *p* value of .035 (z = -2.111), demonstrating statistical significance. The moderate to large effect size was -0.45. Given StageConnect's focus on professional learning, content knowledge, and instructional capacity in theater, these finding make sense.

A closer look at the production roles indicated that all roles improved their self-efficacy between pre- and posttest administrations. Table 5.13 illustrates the difference in means by role. Choreographers demonstrated the most improvement, followed by producers, production managers, stage managers, music directors, and, finally, directors.

Table 5.13

Pre- and Posttest Self-Efficacy Means by Role

Role	Pretest: Total Efficacy	Posttest: Total Efficacy	Difference in Means
Director	4.99	5.38	+ 0.39
Choreographer	4.44	6.09	+ 1.65
Music Director	4.68	5.41	+ 0.73
Stage Manager	4.49	5.49	+ 1.00
Producer	4.59	6.10	+ 1.51
Production Manager	4.70	5.86	+ 1.16

Although all roles improved their theater teaching self-efficacy over the course of the intervention, the smaller gains for directors again indicate additional or different supports may

better benefit directors in the DMIS program. In summary, there was a statistically significant difference between participants' pre- and post-intervention theater teaching self-efficacy, which was driven by improvements in pedagogical content knowledge self-efficacy and instructional self-efficacy, thus confirming H2 (p. 186).

Research Question Six

RQ6 was an outcome evaluation question which include several sub-questions. RQ6 asked: What are the differences between teachers' pre- and post-intervention program sustainability skills? Sub-questions examined the pre- and post results related to: (a) partnership skills, (b) the presence of a theater program mission and goals, and (c) production and community resources. Sub-questions RQ6a and RQ6b leveraged quantitative and qualitative data, whereas sub-question RQ6c employed qualitative data alone. The total analysis for RQ6, therefore, used a mixed methods approach.

Quantitative Findings

Sub-questions RQ6a and RQ6b used sub-scales from the PSAT (Schell et al., 2013) discussed in Chapters 2 and 4. A Wilcoxon Signed Rank test was again the appropriate statistical tool for the analysis given the small sample size and for consistency. Table 5.14 presents the pre- and posttest means for the partnership and strategic planning subscales, which were the measures employed to understand RQ6a and RQ6b.

Table 5.14

Pre- and Posttest Program Sustainability Skill Means

Scale	Pretest mean	Posttest mean
Partnerships sub-scale	4.12	4.36
Strategic planning sub-scale	4.40	4.76

RQ6a. As indicated in Table 5.14, the pretest mean (N=11) for the partnerships subscale was 4.12, and the posttest mean was 4.36. Using an alpha of .05, a Wilcoxon test yielded a *p* value of .878 (*z*= -.153) suggesting that there was not a significant difference between the pre- and post-administrations of the subscale. H3a (p. 187), therefore, which posited a significant improvement in partnership perceptions, was rejected.

Table 5.15 details the difference in means between pre- and post-administrations of the partnerships subscale by production role. In considering the practical significance, a closer look at the production roles revealed that producers demonstrated the largest partnership scale increase, with a gain of 1.73 between administrations. Given that the producer role includes videos and resources designed to nurture partnerships, this suggests that StageConnect may have some effect on improving partnerships in the DMIS program. More research with a large producer sub-sample is necessary to verify this effect and to understand its significance. All production roles demonstrated an increase in partnership means, with the exception of music directors, who experienced a slight decline.

Table 5.15

Pre- and Posttest Partnership Means by Role

Role	Pretest: Partnerships	Posttest: Partnerships	Difference in Means
Director	3.60	4.00	+ 0.40
Choreographer	2.50	3.60	+ 1.10
Music Director	4.00	3.70	- 0.30
Stage Manager	3.40	3.80	+ 0.40
Producer	2.67	4.40	+ 1.73
Production Manager	2.67	3.87	+ 1.20

RQ6b. Table 5.14 also illustrates the difference in means for the strategic planning subscale. With a pretest mean of 4.40 and a posttest mean of 4.76, a Wilcoxon test revealed there was not a statistically significant difference between participants pre- and posttest strategic

planning perceptions (p= .168, z= -1.379). This indicates that H3b (p. 187) should also be rejected.

Similar to the partnership subscale, a closer look at the strategic planning subscale again demonstrated an improvement across all production roles with the exception of music directors, who again experienced a slight decline. Table 5.16 illustrates the pre- and posttest strategic planning means. Producers again demonstrated the largest gain between administrations, with a posttest mean 1.20 higher than the pretest administration. Just as with the partnership content, the majority of the strategic planning content was embedded within the producer course, suggesting that StageConnect has the potential to improve upon teachers strategic planning skills. Further research with a larger producer subsample will examine the platform's capacity to do so.

Table 5.16

Pre- and Posttest Strategic Planning Means by Role

Role	Pretest: Strategic Planning	Posttest: Strategic Planning	Difference in Means
Director	4.33	4.80	+ 0.50
Choreographer	2.50	3.50	+ 1.00
Music Director	4.00	3.70	- 0.30
Stage Manager	3.35	3.70	+ 0.35
Producer	3.00	4.20	+ 1.20
Production Manager	3.07	4.07	+ 1.00

Qualitative Findings

The qualitative strand provided data for each of the sub-questions and, in the case of RQ6c, was essential given that there was not an appropriate subscale on resources in the survey. All three focus groups and the interview were useful in responding to the sub-questions, and a picture emerged that may explain why there was not statistically significant improvement on the variables of interest in RQ6.

RQ6a. Focus group one reinforced the findings of the needs assessment and suggested that StageConnect's content on partnership development may be a helpful resource for teachers. The pre-intervention focus group participants expressed frustration with the state of partnerships for their theater program. In addition to a lack of partnerships, participants in focus group one noted that occasionally the administration would recruit partners and leave it to the teachers to manage them. This often led to problems. The participants expressed challenges of mission misalignment, absent knowledge or skill about working in school settings, and, frequently, issues with reliability. One teacher shared an example,

> Sometimes you get a partner and we have it scheduled. "Great! We're going to have this person choreograph at dance today," and then they don't show up for whatever reason, but at the very last minute, so we're scrambling to redo our rehearsal schedule five minutes before rehearsal. So in a way, we would rather just do it ourselves.

Unreliability is not the only demand on time teachers feel when it comes to partnerships. As identified in the needs assessment, finding the time to identify and nurture partnerships is also a challenge. When asked about barriers to partnerships, one participant stated,

> I think time table. That's a huge part. You have to take the time to seek out those partnerships on top of running the show and getting the kids ready and getting the production set. When you have somebody else seeking those out, it is hard for them to explain our vision. If they're not in our rehearsals or our production meetings, they don't really explain what we need or they think they know what we need.

Another teacher echoed these challenges, stating,

> We are in an entertainment town, so there are tons of people that we could reach out to, but they don't understand the level of what they're working with when it comes to

> elementary school, like it's not a full stage with lights and a catwalk and a full sound system. It's very minimal. So it's been kind of hard going through that whole explanation process and then explaining the vision on top of that and then not being able to see eye to eye and then the partnership just doesn't work out. Or other times, they try to take over. It's like, "What do you need?" They just bring things in and start doing things and we are like, "Oh, boy."

As the teachers expressed, the constraints of time and the misalignment between mission and goals are common pitfalls of fledgling partnerships. Elements of the DMIS platform were designed expressly to improve this element of program sustainability. Although participants did watch the video focused on partnerships, as noted previously, the supporting materials were not downloaded.

The post intervention focus group reported strong support from partners for their program, although they did not attribute this to the StageConnect platform. The participants discussed a successful dinner theater fundraiser offered in partnership with a local restaurant. The teachers also noted having representatives from ten partners in attendance at their performances this year, and attributed these thriving partnerships to their principal. One reason StageConnect may have been ineffective at helping teachers recruit or improve partnerships is because the bulk of the partnership supports are in the producer role. As participants explained, it is common in school theater for a core group of teachers to take on the primary responsibilities of the production and divide and conquer the remaining responsibilities between that group. As one participant explained, "We don't have an official producer, and so putting that stuff under producer wouldn't make sense for us, because we couldn't actually see it." Given that the quantitative findings confirmed that producers demonstrated the largest gains in partnership

skills, making this content available to all StageConnect users may better help improve partnerships in the DMIS program.

RQ6b. This sub-question explored the presence of a theater program vision, mission, and goals, which are an essential foundation to a strategic plan. Similar to the partnerships analysis, the pre-intervention focus group confirmed the findings of the needs assessment, and thus reinforced the value of StageConnect's features designed to help teachers develop a mission, vision, and goals. Although the teachers in focus group one did not have a documented mission statement, vision statement, or list of goals for the theater program in their school, the teachers did report being aligned to a common cause. As one teacher explained,

> While we don't have a written down mission statement, I think all three of us have the same goal of exposing kids to something they might not ever have tried before and then they go on into middle school and we have so many kids now that are successful in their middle school theater programs. And even my son who was behind the scenes…it was just something interesting for him to do, you know, instead of just going home. It's something he'll always remember and he does remember. He still talks about *The Jungle Book* even now that he's in middle school. So even though we don't have it written down, we all, I believe, have that goal in common of enriching children's lives through theater.

Elements of StageConnect were designed to help participants formalize their mission, vision, and goals for their theater program. As discussed in Chapter 3, this process is a foundational step in strategic planning, which may help school theater programs become more enduring. One teacher summarized what can happen when missions are out of alignment,

> We're pretty like-minded, the three of us. We work well together. We can explain things and we get each other. The team is helpful to find the right people to run the production

> because if you're at odds with the people and they don't have the same vision that you do as the production manager and the stage manager, it would just end up being a squabble at best.

If the vision, mission, and goals content in StageConnect can help DMIS teams develop a common direction, their theater programs may be more sustainable.

The post-intervention focus group reported a cohesive and aligned mission statement. When asked if they had a mission statement for their program, one participant said, "Our mission is to help students develop a love for the arts and to find a place that they feel comfortable expressing themselves." Like the content on partnerships, however, the majority of professional learning on strategic planning—in which mission development and goal articulation are foundational steps—is housed within the producer function of the StageConnect platform. Although some of the content is embedded into other resources accessible across roles (for example, as an item on a production meeting agenda template, which was the most downloaded resources in the platform), it is unclear if the teachers in focus group three were influenced by StageConnect's mission and goals materials. However, as verified by the quantitative data, producers demonstrated the largest gain in strategic planning means between pre- and post-intervention administrations. Making this content available to all production roles may improve participants' strategic planning skills. More research is necessary, therefore, to understand if StageConnect can help teachers develop a mission and goals for their theater programs.

RQ6c. When discussing community and production resources, focus group participants noted human, material, space, and financial resources as essential to the continuation and success of their theater programs. StageConnect endeavored to improve educators' capacities to maximize such resources through the content focused on mission, vision, and goals as well as

through discussion forums designed to connect participants across the network for resource sharing and community building. Throughout the coding process, three types of resources emerged as essential for teachers in the DMIS program. These included (a) material, (b) financial, and (c) human resources. The participants also discussed their desires for an online discussion space, which was a stark contrast to the lack of engagement in StageConnect's discussion forums.

Focus group participants discussed how limited equipment and other production materials can be a barrier to school theater program sustainability. Teachers often report spending a disproportionate amount of time securing the basic equipment necessary for their students to be seen or heard on stage. This, in turn, can lead to missed deadlines, burnout, or productions in which the audience has difficulty hearing the performers. As one teacher explained,

> The whole sound system was an issue for years. We would rent the equipment and then someone else would come in and run it and then the next year it was somebody different. But then they brought this other equipment and we thought we were getting the equipment, but then they took it back. It was an issue every year and then finally, we rented some equipment on the advice of another parent who's a sound engineer and then he came in to set it up and run it and that was good. Then I did it last year based on the instruction from the parent the year before and I think we finally kind of got settled. We kind of know what we're doing now. Yeah, sound is hard. It's so tricky. People have careers out of this. We're trying to do things, but these people get paid money to do it in the world.

When asked about other material needs, participants reported basic items that were often repurposed for the school play. Items like fabric for backdrops, cardboard for props, paint, and

costume basics brought from home create the world of the school play. Throughout the focus groups, participants expressed two challenges with material resources—acquiring them, and knowing what to do with them. As the teacher struggling with sound expressed, the time and communication necessary to address these two challenges can feel insurmountable when opening night is looming.

StageConnect endeavors to address these challenges in two ways. First, by providing professional learning on technical theater and design elements, the platform aims to improve teachers' capacity to use such resources. The production manager course, specifically, includes demonstrations and tutorials on sound design, lighting design, costumes, sets, and props. Next, one of the primary goals of the discussion forums was to facilitate the sharing of both knowledge and materials for producing a school play. Unfortunately, due to the previously mentioned limitations of partial team participation and the blurred disciplinary boundaries specific to the production manager and producer roles, more research is necessary to understand whether StageConnect is effective in helping participants maximize the material resources for their production.

The discussion forums were also ineffective in their current format. Participants in all focus groups commented that they wished StageConnect offered forums for connecting with other teachers, to share inspiration, exchange material resources, and build community. The platform does offer this functionality in many ways. Private forums are available for school teams to collaborate with each other, while open forums are available for teachers to connect by production role or show. Finally, a general forum is open to all enrolled participants. Over the six-month intervention timeframe, not one teacher posted on the discussion forums. Members of the Disney Theatrical Group education department began posting prompts to promote

conversation halfway through the intervention, but no teachers replied. LMS data confirms that only three teachers visited the discussion forums, none of whom engaged. Given that participants requested such functionality throughout the focus group interviews, this suggests that the location of the forums should be reconsidered. Given this lack of use, more research is necessary to see if such forums can improve participant's acquisition and knowledge of material resources.

Financial resources also surfaced as a need for focus group participants. Notably, many participants expressed challenges in securing funding from their administrations, even when other groups received it. Several teachers expressed that the arts were paid lip service—administrators often espoused their value, but did not provide the basic financial support given to other programs. One teacher explained,

> I think the biggest challenge probably would be funding, just future funding. We're starting to do a little bit better at manipulating the money we have to make it more sustainable, but I'd say probably that and then just support from the staff and administration and all of that with it, because that makes it hard.

Her colleague responded,

> But we're noticing that they give the sports extra things and we're looking around "Hey, what? You guys get this? And you get paid, we don't even get paid and we're not getting what you're getting for the support."

Similarly to the material resources, StageConnect aimed to improve a team's capacity to garner financial resources through the platform. The producer role includes a module dedicated to fundraising and financial sustainability. Unfortunately, due to the inconsistent participation across production roles, only three of the six schools included a teacher enrolled in the producer

course. More data is necessary, therefore, to understand if these resources can build teachers' fundraising capacities.

The final resource need that emerged through the focus groups was human resources. From the core teacher team to parent volunteers, staging a school musical requires many hands. Throughout the focus groups, teachers mentioned relying on their own informal networks for advice and support. One teacher expressed,

> Well, I have a really good music teacher friend. Her name's Kate. Everybody knows who Kate is. She's like my musical theater guru. She's been doing it forever at her school and I'm always asking her opinion and advice.

Another teacher said that when faced with a malfunctioning soundboard on opening night, she called her husband who had some experiencing working with sound. Despite the value of these informal networks, teachers also expressed challenges in recruiting the human power needed to sustain their programs. Although some schools reported engaged parent communities ready to pitch in on weekends to help with scenery and costumes, others had trouble recruiting support for their theater programs. Even some teachers on the core production team are disengaged in the process, likely due to being assigned to the project rather than opting in. One teacher explained,

> They've just kind of said, "Okay, you're the music teacher, you're on Disney now." So he comes to each practice but he doesn't engage. He just sits there and plays on his phone and hits the play button for us on the music. And we're not musical people at all. Like if they need me to sing while I'm teaching my dance, it doesn't happen.

StageConnect was designed to improve the human resources necessary for school theater in several ways. First, the platform itself provides professional learning intended to improve teachers' content knowledge and theater teaching self-efficacy. The statistically significant

improvement to these constructs, combined with participants' positive perceptions of the amount, quality, type, and relevance of professional learning, may improve the human resources needed to produce a play. Beyond the core teacher team, however, schools often engage with parents and other volunteers. The producer role features content and support on engaging the school and local community. Due to the limited enrollment of producers in the intervention, however, more research is needed to understand whether such content can improve teachers' perceptions of the human resources available to them. Finally, the discussion boards were also intended to provide a forum for teachers to exchange ideas and tips for engaging their communities. Due to the previously discussed lack of participation on these forums, more research is necessary to understand if they can be effective in this regard.

Research Question Seven

The final research question, which is an outcome evaluation question, asked about the relationships between the measured constructs. RQ7 asked: What is the relationship between participants' sense of theater teaching self-efficacy, theater content knowledge, and program sustainability skills? Quantitative data was leveraged for this analysis.

Quantitative Findings

A Spearman correlation test was used to check whether there was a significant relationship between specific variables of interest. Given the abnormal distribution of some of the data, this nonparametric test was most appropriate. Although the majority of relationships yielded no statistical significance, a few relationships did emerge from the data. Where relationships emerged, the data was checked for a monotonic relationship (i.e., both variables either increased or decreased together), ensuring that the assumptions for the test were met.

For the total sample, there was no significant relationship between theater teaching self-efficacy, theater content knowledge, and/or program sustainability skills (i.e., partnerships and strategic planning skills). For one of the production roles, however, a relationship did emerge. A Spearman's rank-order correlation determined a strong, positive correlation between the posttest total theater teaching self-efficacy score and director's posttest content knowledge assessment (r_s = .841, p = .035), suggesting that directors' self-efficacy and content knowledge are related. As previously discussed, of the self-efficacy subscales, instructional self-efficacy and pedagogical content knowledge self-efficacy demonstrated significantly higher posttest means. A closer look at the directors' self-efficacy revealed that this relationship was driven by their significant improvement in instructional self-efficacy (r_s = .889, p = .015), not their pedagogical content knowledge self-efficacy, which was insignificant (r_s = .696, p = .125). This suggests that the directing section of StageConnect was more effective at teaching participants how to direct than it was at teaching the disciplinary knowledge of directing. This finding is relevant, as it gives some indication that improvements to the directing section might focus on domain-specific content, rather than instructional approaches for directing the school musical. The remaining roles either did not demonstrate a statistically significant relationship or had sub-sample sizes too small to support the Spearman correlational analysis.

A Spearman correlation test also revealed a statistically significant, strong, positive relationship between the total sample's partnership scores and their strategic planning scores (r_s = .906, p = .000), suggesting that teachers with capacity to develop or strengthen partnerships may also have foundational strategic plans in place. Given the aforementioned small sample size and inconsistent participation across production roles and school teams, more research is necessary to understand the relationships between teachers' theater content knowledge, their

theater teaching self-efficacy, and program sustainability skills. Regardless, the analysis did indicate a positive relationship between some of the variables of interest, and illuminated the type of improvement necessary for the platform's lowest performing production role.

Implications

Activity theory (Engeström, 1987) was the theoretical framework that guided the development of StageConnect. The study revealed the interconnected nature of the activity system, but specifically illuminated that the instruments and subjects of the activity system encompassed the primary areas of intervention. Instruments, for example, included teacher content knowledge, self-efficacy, and the resources necessary for production. The subjects of the activity system—the teachers themselves—were essential for the self-paced, asynchronous intervention. The study also exposed how assumptions about the activity system's division of labor were not always accurate. Although teachers operated within the disciplinary boundaries of theater for many production roles, other jobs were divided very differently in school contexts than they are in professional theater settings. Activity theory helped to hone-in on areas for improvement in future iterations of StageConnect.

The goals of StageConnect are to (a) improve teachers' theater content knowledge, (b) improve participants' theater teaching self-efficacy, and (c) improve teachers' theater program sustainability skills, which include their partnership skills, their strategic planning skills (especially the development of a mission and goals), and their capacity to maximize resources for their theater programs. This study shed light on the platform's capacity to achieve these goals and also identified opportunities for improvement to the StageConnect platform. Applied research endeavors to make sense of a problem of practice and uses the resulting knowledge to improve upon the problem (Lochmiller & Lester, 2017). As the present study is a piece of

applied research, the findings can inform the future development of StageConnect, and, ultimately, theater programs in under-resourced elementary schools.

Two of the more meaningful findings from this study are StageConnect's capacity to improve participants' theater teaching self-efficacy and their theater content knowledge. These two foundations may help theater programs become more enduring in under-resourced elementary schools. By demonstrating that online, asynchronous, professional learning can improve teachers' content knowledge and self-efficacy, this study is a first step towards demonstrating that digital arts education can be successful. Although the sample size and applied nature of this research limits its generalizability, it nonetheless demonstrates that future research on this topic may be worthwhile.

Although the study was successful in demonstrating gains in theater teaching self-efficacy and theater content knowledge, in other ways it fell short. One of the features of applied research, however, is its capacity to improve problems of practice (Lochmiller & Lester, 2017). Improvement science is the practice of using research to understand a problem and iteratively test interventions that may improve it. This early version of StageConnect represents the first intervention in the plan-do-study-act cycle that frames improvement science (Bryk, Gomez, Grunow, & LeMahieu 2015). Following the cycle, the literature review (Chapter 1) and needs assessment (Chapter 2) represent the "plan" phase. The intervention itself represents the "do" phase, and this analysis is the "study" phase. The "act" phase will be the eventual rollout of StageConnect across the full DMIS network. True to improvement science—and more broadly, applied research—the intervention's limitations present an opportunity for improvement that could position StageConnect to better meet the needs of teachers. These challenges in the

intervention were not failures, therefore, but discoveries that will inform research-backed changes to the platform.

Although the logic model and theory of treatment presented in Chapter 4 were grounded in the research and over a decade of working within the DMIS program (including as its creator), some of the assumptions for fidelity of implementation were not met. When working to improve complex social problems, this can be a common experience. As Bryk et al. (2015) explained, "Achieving successful change in complex work systems means recognizing that one cannot predict ahead of time all of the details that need to be worked through nor the unintended negative consequences that might also ensue" (p. 25). When analyzed critically, however, these pitfalls can often identify opportunities for future improvement. Three areas for improvement emerged through the research, none of which may have been identified if not for the intervention study. These improvements concern full-team participation, the structure of the platform, and the polarity of replication vs. creation. These implications for improvement are next discussed.

Full Team Participation

As confirmed through the LMS data and discussed in the focus groups, all but one of the participating schools lacked full team enrollment on StageConnect. Many participants identified the time demands and limited bandwidth of teachers as reasons some teachers did not participate. DMIS could better build full team engagement with StageConnect in two ways. First, the platform should be integrated into all new cohorts of DMIS as part of the core programming. Unlike in the intervention, embedding StageConnect into the daily operation of DMIS may allow educators to become accustomed to the platform and its various applications. This would also allow educators to access StageConnect during the established meeting times of the DMIS program. To achieve this, some focus group participants suggested hybrid in-person and online

models. By training teaching artists to use StageConnect as a teaching resource (rather than the printed teacher manuals currently used in the program), the platform could be better integrated into the existing DMIS program and may benefit from wide adoption across school teams.

The next way to improve full-team participation in the platform would be to incentivize engagement. StageConnect is a robust professional learning environment with hours of videos and other content developed by theater education experts. By developing documentation on the type, quality, and rigor of professional learning offered through StageConnect, and by aligning this content to various standards (e.g., National Core Arts Standards, the Standards for Professional Learning, or the Common Core State Standards), partner organizations could work with districts to provide teachers with continuing education credits. Such credits may be required of teachers, and might be used to increase income or for other advancements. Improving full team participation on StageConnect is essential in ensuring schools receive the appropriate amount and type of professional learning. If only some production roles participate, as was illustrated by the study, the full team—and therefore production—will not benefit from the holistic StageConnect offerings. Even with full team participation, however, the study's findings also have implications for the very structure of StageConnect.

The Structure of the Platform

As detailed in Chapter 4, StageConnect features three primary sections. The *Fundamentals of Musical Theater* course is completed by all participants, who next complete the *Fundamentals of Your Role* course(s). The *In-Rehearsal* area is the third primary section of the platform, and includes on-demand resources organized by production milestone for the four roles active during rehearsal (director, music director, choreographer, and stage manager). As identified in the study, the *In-Rehearsal* sections were accessed less frequently than the

Fundamentals courses. This suggests that participants either do not feel the need to return for specific resources, or forget to do so. One possible improvement would be to transform the *In-Rehearsal* section into a collaboration space for the production team. In addition to providing supports and resources organized by production milestone, this approach could encourage the team to apply such materials to their own productions. Alternatively, it is possible that the *In-Rehearsal* section is not needed at all. Given that participants had no perceptions of it one way or another, it is likely that it is not detracting from StageConnect's goals and more data could better inform the future of the section. Another element of StageConnect's structure, however, is impeding its goals.

As identified by the LMS data and confirmed by the focus group participants, the StageConnect features intended to improve partnership skills, strategic planning skills, and resource maximization were under-utilized during the intervention. The mixed methods design of the study was particularly well suited to contextualizing why this might be the case. The disparity between the disciplinary boundaries of theater and the reality of schools was an important finding of this study. Whereas DMIS assumed that teachers approached producing and production manager duties as they did the other roles, the reality is that schools divvy up this work among the core team and even parent volunteers. Accordingly, without a singular point person in these roles, the relevant content was under-accessed, and more research is necessary to understand if the platform can improve on these areas of program sustainability. The biggest implication here, however, does not concern the content itself, but rather how it is arranged and who has access to it on the StageConnect platform. Given the divide-and-conquer nature of these essential theater production duties, it may be more beneficial to provide all participants with

access to these courses, regardless of their official role in the program. Additionally, providing schools with additional log-in credentials for parents or other volunteers may be savvy.

As with the program sustainability content, the discussion boards were unused during the intervention. Interestingly, participants across all three focus groups expressed a desire for such a feature and were surprised to learn the platform offered them. This suggests that they did not encounter them during their use of StageConnect. One simple solution would be to move their location within the site. Currently, participants can find the discussion boards embedded within the *Fundamentals of Musical Theater* course and within the *Fundamentals of Your Roles* courses. By dedicating a new module to discussions accessible from each participant's dashboard, visibility of this sought-after feature may improve its use. Additionally, by giving participants the option to opt-in to push notifications and emails regarding discussion forum activity, they may be more likely to engage on the discussion boards. Finally, by ensuring that Disney Theatrical Group staff is prompting discussion and available to answer teachers' questions, the feature could provide a direct line to the organization that developed the program, which may, in turn, boost participation.

Replication vs. Creation

Another implication of the findings is the need for DMIS to respond to the question whether replicable resources undermine or advance its mission. Although the participants clearly engaged with StageConnect and the platform was ultimately successful in improving their content knowledge and self-efficacy, participants regularly expressed a desire for replicable resources. Such resources would do much of the leg work for teachers, thus responding to the pervasive challenge of limited time and overwhelm identified in the study. The materials would also be exemplar in terms of content, having been tested throughout the DMIS program's

decade-plus history in schools. On the other hand, by providing replicable materials, DMIS would not be teaching the craft of theater production so much as providing a prescriptive approach to producing a show. These seemingly opposed approaches can be reconceptualized not as an either/or challenge, but as a both/and opportunity that could advance DMIS's ultimate goal of building enduring theater programs in schools.

This pull between replication and creation is a classic polarity, which highlights two contrasting approaches to the work (Kise, 2014). Each has its benefits and drawbacks. In the replication model, for example, teachers spend considerably less time creating schedules, designs, and choreography for their productions, but they may miss out on learning the artistic skills of stage managers, designers, or choreographers. This paint by numbers approach reduces the artistic participation of the teachers DMIS invests in. The creation model, on the other hand, believes each teacher has creative capacity, and provides foundational training to develop that capacity over time. In this model, teachers develop an artistic voice and build skills that can be applied across many shows, but they could burn out along the way. As noted by the focus group participants in both the needs assessment and the intervention study, producing a school musical is a herculean task, and the perception of StageConnect as one more thing to do could be a barrier to participation. In reconceptualizing polarities, however, not as sides to-be-won, but as interdependent systems necessary for growth (Kise, 2014), a new implication emerges about the future of StageConnect. The question may not be whether the platform should train artists or provide a templatized approach to art, but how to deliver the content most useful to individual teachers. If DMIS's goal is to develop sustainable theater programs, responding to the needs of the individual educators leading school theater programs may go farther than a single approach

alone. One actionable implication of the study that could help facilitate this differentiation of instruction would be to provide school teams with show-specific content.

Participants in the DMIS program produce 30-minute Disney musicals adapted for the stage expressly for young performers. As of today, there are seven titles available, and each comes with a kit of show-specific resources to aid teachers in the production. From student scripts, to accompaniment tracks, to production and design tips for the director, these hard copy materials are shipped to participants' schools. Because of the volume of content in print form, it is possible that DMIS teachers do not maximize the resources provided to them. Unlike a digital medium that allows for modular organization and easy searching, a 400-page binder of materials is cumbersome to use and review. By digitizing these support materials and organizing them in show-specific categories on StageConnect, teachers may better benefit from the robust materials provided to them with their performance license. Additionally, new show-specific content could respond to teachers' requests for replicable material (e.g., rehearsal schedules for *The Lion King*, or blocking for *The Jungle Book*), and is a practical way to respond to this demand. By providing participants with multiple examples, some developed by Disney and others developed by other teachers, teachers may find value in reviewing options and selecting materials that best align with their bandwidth and needs.

In summary, the research led to several modifications for the next iteration of StageConnect. The following proposals synthesize the above discussion into six recommendations for the future improvement of StageConnect.

- StageConnect should be integrated into the established in-person DMIS model. By positioning the platform as a prerequisite to the first-year residency and integrating it into in-person events, StageConnect could be better maximized.

- Partner arts organizations should incentivize participation by working with school districts to provide continuing education credits to participants. The platform could additionally recognize engagement with badges and acknowledgements.
- The *In-Rehearsal* section could be reconceptualized as a collaboration space and online professional learning community for the school team.
- The producer and production manager roles should be unlocked and available to all participants, regardless of production role, to align DMIS to the needs of teachers rather than the disciplinary boundaries of theater. Among other benefits, the vision, mission, and goals support could ultimately lead to more enduring theater programs.
- To boost participation, the discussion forums should be moved to a dedicated module on each participant's dashboard, rather than embedded throughout various courses.
- Title-specific modules could provide participants with replicable resources specific to their show, thus striking a balance between the creation taught through the courses and the replication available through the show supports.

The applied nature of the research led to these evidence-based recommendations for the iterative improvement of StageConnect. Despite these findings, the study had several limitations, which should be considered for a holistic understanding.

Limitations

Although the intervention was successful in improving participants' content knowledge and self-efficacy, in many ways the findings pointed not toward the capacity of StageConnect to improve other variables, but to improvements that should be made to StageConnect itself. In the spirit of improvement science and applied research, these findings have value and will inform the future development of StageConnect which, in turn, could inform the sustainability of school

theater programs. Additionally, some of the barriers identified were outside the control of the DMIS program. In line with the improvement science cycle, after changes are made to the StageConnect platform additional research will be necessary to understand the platform's capacity to improve teachers' partnership, strategic planning, and resource skills. There were also, however, limitations of the research itself, including sample size, the quasi-experimental design, challenges with fidelity of implementation, and potential bias. This section discusses these limitations.

The final sample size of 11 participants across six schools was much smaller than the intended sample size of 35 across twelve schools, however is comparatively strong given the participants' face many professional demands in under-resourced schools. Because of this smaller sample size, the study had low statistical validity. Given the applied nature of the research, which was developed to improve a problem of practice within the DMIS program, however, such significance may be less important than the practical significance of programmatic improvement. The quasi-experimental design, too, carries inherent limitations. Adding a control group would improve the external validity of the study, and may lead to better generalizability (Shadish, Cook, & Campbell, 2002). Given the context of the study and the structure of the DMIS program, however, a control group did not align with the goals of the research.

Challenges with fidelity of implementation also limit the interpretation of the findings (Dusenbury et al., 2003). As discussed in Chapter 4, the intervention's logic model and theory of treatment assumed certain conditions that were not always met. More specifically, minimum teacher participation of at least two teachers per school was not met in three schools. Further, half of teachers who had access to the *In-Rehearsal* content did not access that section.

Additionally, likely due to the small sample size, few teachers were enrolled in the producer course, which limited access to StageConnect's features designed to improve school partnerships and help develop a theater program mission and goals. Finally, although not stipulated in the logic model and theory of treatment, inconsistent enrollment across school teams meant the entire team did not receive the full professional learning offered through the intervention.

Although most of the instrumentation used in the study was previously validated in extant literature, the theater content knowledge assessment was an original instrument developed by the researcher. As such, the findings from the assessment are not generalizable, though they were not intended to be. As this applied research focuses specifically within the DMIS program, an instrument to measure the content delivered through StageConnect was essential for the study. Still, this limitation should be taken into consideration by those who review this research—the findings are specific to both the DMIS program and the StageConnect intervention, and cannot be generalized beyond that context.

Finally, all research is subject to bias, and this study was no exception. Given my position as the Director of Education at Disney Theatrical Group, and as the developer of the DMIS program, participants may have experienced response bias by providing positive feedback or information they assumed I wanted to hear. This may have been somewhat mitigated by reminders of the goals of the study and requests for candid responses, which were made in all focus groups. Additionally, member checking ensured that I characterized participants' thoughts accurately and served as another checkpoint for bias. Nonetheless, readers should hold my position and history with the DMIS program in mind when considering the findings.

Future Research

As the StageConnect intervention moves through the improvement science cycle, more research is necessary to understand which changes lead to improvements. Elements of this study should be replicated with the aforementioned adjustments to discussion boards and access to the producer and production manager content. Future research could indicate whether these changes influence participants' program sustainability skills. With a few specific exceptions, the research did not demonstrate a relationship between participants' theater teaching self-efficacy, theater content knowledge, and program sustainability, so additional research with a larger sample size may better illuminate if such relationships exist. Further, changes to DMIS policy, such as in-person/online integration of StageConnect and full-team onboarding to the platform, should be studied to understand if such adjustments can improve fidelity of implementation and, ultimately, theater program sustainability. Finally, given the timeframe of the study, the logic model and theory of treatment's proximal outcomes were measured. More robust research on theater program sustainability would require a multi-year study, and should be considered to understand the full capacity of DMIS and StageConnect to foster enduring programs.

Conclusion

Theater participation in elementary schools is inequitable (Parsad & Spiegelman, 2012), which is unjust due to the many benefits such participation can provide (Catterall & Iwanaga, 1999; Fiske, 1999; Goldstein, Lerner, & Winner, 2017; Greenfader & Brouillette, 2017; Rose, Parks, Androes, & McMahon, 2000). This dissertation study examined the perceptions and outcomes of 11 teachers across six schools who participated in an online professional learning program designed to make their DMIS-seeded theater programs more enduring. The participants demonstrated a statistically and practically significant improvement to their theater content

knowledge and theater teaching self-efficacy beliefs after participating in the six-month intervention. Although the study did not demonstrate statistically significant improvements to partnership skills or strategic planning skills, there is some indication of practical significance and future research with key changes to StageConnect may better identify its capacity to intervene in these areas. Similarly, participants indicated some capacity to articulate a theater program mission and supporting goals, but more research is necessary to fully understand if and how StageConnect can support teachers in this endeavor.

The StageConnect intervention was ambitious in scope, breadth, and depth, and in many ways this widely cast net was useful for identifying empirically grounded improvements to the platform. Additionally, the research demonstrated very high participant perceptions of usability, suggesting that StageConnect could be scaled without the steep learning curve sometimes associated with online learning. As the StageConnect platform continues through the improvement cycle, all changes and future applications should be aligned with its ultimate goal—to help build lasting theater programs in under-resourced elementary schools.

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Appendix A

Note: The following survey was administered via Qualtrics. Where logic functionality was employed the word "OR" indicates variations based on subsample type. Where appropriate, each indicator will have a corresponding agreement scale, which are provided once by category here for legibility.

Disney Musicals in Schools Sustainability Questionnaire

1. Please select your Disney Musicals in Schools program city:
    - Program A
    - Program B
2. Please select your role in the Disney Musicals in Schools program:
    - Teacher or administrator at a participating school
    - Teaching artist at an arts organization
    - Program administrator at an arts organization
3. In what year did your school OR organization first begin Disney Musicals in Schools?
    - 2011-2012 school year
    - 2012-2013 school year
    - 2013-2014 school year
    - 2014-2015 school year
    - 2015-2016 school year
    - 2016-2017 school year
    - 2017-2018 school year
4. Did your school produce a musical this year?
    - Yes
    - No
5. Will your school OR organization continue offering Disney Musicals in Schools next year?

Teaching Artist version: Will you participate as a Disney Musicals in Schools teaching artist next year?

- o Definitely yes
- o Probably yes
- o Might or might not
- o Probably not
- o Definitely not

Preparedness

For each statement, select the number that indicates the extent to which you agree.

To little or no extent						To a very great extent	Not able to answer
1	2	3	4	5	6	7	NA

6. You are well prepared to continue producing theater OR offer Disney Musicals in Schools at your school OR organization.
7. You are not prepared to continue producing theater OR offering Disney Musicals in Schools at your school OR organization.

Environmental Support[1]

For each statement, select the number that best indicates the extent to which your program has or does the following things.

To little or no extent						To a very great extent	Not able to answer
1	2	3	4	5	6	7	NA

[1] Items in this section were adapted from *Program Sustainability Assessment Tool* v2, copyright 2013, Washington University, St Louis, MO. All rights reserved.

8. Champions exist who strongly support your Disney Musicals in Schools Program.
9. Your Disney Musicals in Schools program has strong champions, with the ability to garner resources.
10. Your Disney Musicals in Schools program has leadership support from within the larger school OR organization.
11. Your Disney Musicals in Schools Program has leadership support from outside of the school OR organization.
12. Your Disney Musicals in Schools program has strong public support.

Funding Stability Error! Bookmark not defined.

For each statement, select the number that best indicates the extent to which your program has or does the following things.

To little or no extent						To a very great extent	Not able to answer
1	2	3	4	5	6	7	NA

13. Your Disney Musicals in Schools program exists in a supportive economic climate.
14. Your Disney Musicals in Schools program implements policies to help ensure sustained funding.
15. Your Disney Musicals in Schools program is funded through a variety of sources.
16. Your Disney Musicals in Schools program has a combination of stable and flexible funding.
17. Your Disney Musicals in Schools program has sustained funding.

Satisfaction with School Level Resources[2]

18. How adequate are the following types of support for Disney Musicals in Schools in your school OR in participating schools?

Very inadequate						More than adequate	Not able to answer
1	2	3	4	5	6	7	NA

- Funding
- Facilities (e.g., space, storage)
- Materials, equipment, tools
- Instructional time for the arts
- Number of arts specialists
- Arts professional development for teachers
- Student interest or demand
- Parent or community support

Partnerships[1]

For each statement, select the number that best indicates the extent to which your program has or does the following things.

To little or no extent						To a very great extent	Not able to answer
1	2	3	4	5	6	7	NA

19. Diverse community organizations are invested in the success of your Disney Musicals in Schools program.

20. Your Disney Musicals in Schools program communicates with community leaders.

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[2] This item was adapted from the National Center for Education Statistics fast response survey (2009)

21. Community leaders are involved with your Disney Musicals in Schools program.

22. Community members are passionately committed to your Disney Musicals in Schools program.

23. The community is engaged in the development of your Disney Musicals in Schools program goals.

Task Interdependence[3]

For each statement, select the number that best indicates the extent to which your program has or does the following things.

To little or no extent						To a very great extent	Not able to answer
1	2	3	4	5	6	7	NA

24. In the Disney Musicals in Schools program, you have a one-person job; you rarely have to check in with others.

25. In the Disney Musicals in Schools program, you have to work closely with your colleagues to do your work properly.

26. In order to complete your work in the Disney Musicals in Schools program, you and your colleagues have to exchange information & advice.

Organizational Capacity[1]

For each statement, select the number that best indicates the extent to which your program has or does the following things.

To little or no extent						To a very great extent	Not able to answer
1	2	3	4	5	6	7	NA

[3] This item was adapted from Van der Vegt et al.'s (2003) task interdependence scale

27. Your Disney Musicals in Schools program is well-integrated into the operations of the school OR organization.

28. School OR organizational systems are in place to support the various Disney Musicals in Schools program needs.

29. School OR organization leadership effectively articulates the vision of the Disney Musicals in Schools program to external partners.

30. School OR organization leadership effectively manages staff and other resources.

31. Your Disney Musicals in Schools program has adequate school OR organization staff to complete the program's goals.

Program Evaluation[1]

For each statement, select the number that best indicates the extent to which your program has or does the following things.

To little or no extent						To a very great extent	Not able to answer
1	2	3	4	5	6	7	NA

32. Your Disney Musicals in Schools program has the capacity for quality program evaluation.

33. Your Disney Musicals in Schools program reports short term and intermediate outcomes.

34. Evaluation results inform Disney Musicals in Schools program planning and implementation.

35. Disney Musicals in Schools evaluation results are used to demonstrate successes to funders and other key stakeholders.

36. Your Disney Musicals in Schools program provides strong evidence to the public that the program works.

Program Adaptation[1]

For each statement, select the number that best indicates the extent to which your program has or does the following things.

To little or no extent						To a very great extent	Not able to answer
1	2	3	4	5	6	7	NA

37. Your Disney Musical in Schools program adapts strategies as needed.

38. Your Disney Musicals in Schools program proactively adapts to changes in the environment.

39. Your Disney Musicals in Schools program makes decisions about which components are ineffective and should not continue.

Communication[1]

For each statement, select the number that best indicates the extent to which your program has or does the following things.

To little or no extent						To a very great extent	Not able to answer
1	2	3	4	5	6	7	NA

40. Your Disney Musicals in Schools program has communication strategies to secure and maintain public support.

41. Your participating Disney Musicals in Schools program staff communicate the need for the program to the public.

42. Your Disney Musicals in program is marketed in a way the generates interest.

43. Your Disney Musicals in Schools program increases community awareness of theater education.

44. Your Disney Musicals in Schools program demonstrates its value to the public.

Strategic Planning[1]

For each statement, select the number that best indicates the extent to which your program has or does the following things.

To little or no extent						To a very great extent	Not able to answer
1	2	3	4	5	6	7	NA

45. Your Disney Musicals in Schools program plans for future resource needs.

46. Your Disney Musicals in Schools program has a long-term financial plan.

47. Your Disney Musicals in Schools program has a sustainability plan.

48. Your Disney Musicals in Schools program's goals are understood by all stakeholders.

49. Your Disney Musicals in Schools program clearly outlines roles and responsibilities for all stakeholders.

Value of Theater Education[4]

50. Do you agree or disagree with each of the following statements about theater instruction at this school OR in participating schools?

- I consider instruction in theater an important part of the school's OR participating schools' curriculum.
- Students look forward to instruction or activities that involve theater.
- Theater specialists should be responsible for theater instruction.

[4] This item was adapted from the National Center for Education Statistics fast response survey (2009)

Appendix B

The following focus group protocols were used to conduct semi-structured interviews with participants from the three stakeholder groups.

Arts Organization Staff Focus Group Protocol

Introduction

- Goals
- Housekeeping (informed consent forms, audio recording)
- Review structure, confidentiality, etc.

General Sustainability

- What do you think makes DMIS sustainable at your organization?
- What are threats to sustainability at your organization?
- What makes DMIS sustainable at schools?
- What contributes to schools' decisions not to continue the program?

Challenges

Partnerships

- Who are the current or potential partners within your organization? Who are you strongest partners internally? Which groups do you wish had more buy in?
- Who in the school, the arts community, or the broader community currently does not recognize and value the work of the program but is in a position to provide particularly vital support?
- Which community leaders might DMIS be relevant to? Have you engaged with these people or organizations in the past? How? To what result?
- Is your broader local community aware of DMIS? Are they engaged with it?

School Resources

- How do schools pay for their theater program as they advance through DMIS?
    - Do schools tend to have diverse sources of funding, or one or two streams? Do you think this influences program sustainability at the school level?
- When considering the resources available to schools, arts professional development for teachers ranked low. What kind of arts professional development do teachers in your district receive?
    - How might you reconcile this with the notion that teachers report feeling generally well-prepared for their DMIS programs?
- How do teachers procure the materials needed for their DMIS program? What do they tell you or the TAs about materials for physical production?

Communication

- How has communication been effective in your program? In what ways has it not been adequate? What impact, if any, does this have on program sustainability?
- What steps do you take to market and publicize your DMIS program?
- Are there any indications that new people have come to recognize your program through communications efforts? Or indications that communications have not been successful?

Strengths

Preparedness

- The theater staff group reports feeling well prepared for the DMIS program. What specifically has led to this sense of preparedness? Does this impact program sustainability?

- What steps do you take to prepare new team members and pass along program knowledge?
- Are there any elements of programming or your work for which you personally feel less prepared?

Collaboration

- The theater staff group reports strong collaboration skills. In what ways do you collaborate with other members of your team? With TAs? Teachers?
- What skills, mindsets, or traits lead to good collaboration in your DMIS program? How does this help with program sustainability either at your organization or at the school level?

Environmental Support

- Who are your program's biggest internal champions? How did you cultivate those champions? Have they helped the sustainability of your program?
- Who are your program's biggest external champions? How did you cultivate those champions? Have they helped the sustainability of your program?

Other Stakeholder Group Responses

- Teachers and school staff ranked partnerships as the lowest scale on the survey. What do you attribute that to? Is that surprising or expected? (Funding Stability and Strategic Planning were second and third to last, respectively).
- Teaching Artists ranked Satisfaction with School Level resources as the lowest scale on the survey. What do you attribute that to? Is that surprising or expected? (followed by strategic planning and partnerships)

Lug Nut review (Seidel et al., 2000). Use as a follow-up as specific examples arise:

- Who puts time into attending to this element of sustaining the program? How much time?
- Have you followed through on plans made in the past related to this element of the program?
- How could sustaining this element of the program be made easier in the coming year?

Teaching Artists Focus Group Protocol

Introduction

- Goals
- Housekeeping (informed consent forms, audio recording)
- Review structure, confidentiality, etc.

General Sustainability

- What do you think makes DMIS sustainable at your organization?
- What are threats to sustainability at your organization?
- What makes DMIS sustainable at schools?
- What contributes to schools' decisions not to continue the program?
- What are the attributes or characteristics of the most successful DMIS schools you've worked within? Of the least successful?

Challenges

School Resources

- How do teachers procure the materials needed for their DMIS program? What do they tell you? What do you notice about materials for physical production?
- How do schools pay for their theater program as they advance through DMIS? Do you work with them on this or hear them discuss future plans?

- Do schools tend to have diverse sources of funding, or one or two streams? Do you think this influences program sustainability at the school level?
- When considering the resources available to schools, arts professional development for teachers ranked low. How do teachers respond to the PD they get from you in the program?

Strategic Planning

- Do you find schools have a long-term vision for DMIS? Does the arts organization at which you work have a long-term vision for DMIS? Can you describe it?
- How much access to that information do teaching artists have?

Partnerships

- Who are the current or potential partners within the arts organization at which you work? Who are you strongest partners internally? Which groups do you wish had more buy in?
- Who in the school, the arts community, or the broader community currently does not recognize and value the work of the program but is in a position to provide particularly vital support?
- Which community leaders might DMIS be relevant to? Have you engaged with these people or organizations in the past? How? To what result?
- Is your broader local community aware of DMIS? Are they engaged with it?

Strengths

Preparedness

- The teaching artist group reported feeling well prepared for the DMIS program. What specifically has led to this sense of preparedness? Does this impact program sustainability?

- How do you stay current on your practice as it relates to DMIS?
- Are there any elements of programming or your work for which you personally feel less prepared?

Collaboration

- The teaching artist group reports strong collaboration skills. In what ways do you collaborate with other teaching artists? With your arts organization? Teachers?
- What skills, mindsets, or traits lead to good collaboration in your DMIS program? How does this help with program sustainability at the school level?

Organizational Capacity

- Teaching artists ranked organizational capacity as high. What makes your arts organization successful in their implementation of the DMIS program?
- Are there any attributes of your arts organization that make participating schools more successful in sustaining programs?

Other Stakeholder Group Responses

- Teachers and school staff ranked partnerships as the lowest scale on the survey. What do you attribute that to? Is that surprising or expected? (Funding Stability and Strategic Planning were second and third to last, respectively).
- Theater staff ranked partnerships resources as the lowest scale on the survey. What do you attribute that to? Is that surprising or expected? (followed by satisfaction with school resources and communication)

Lug Nut review (Seidel et al., 2000). Use as a follow-up as specific examples arise:

- Who puts time into attending to this element of sustaining the program? How much time?

- Have you followed through on plans made in the past related to this element of the program?
- How could sustaining this element of the program be made easier in the coming year?

Teachers Focus Group Protocol

Introduction

- Goals
- Housekeeping (informed consent forms, audio recording)
- Review structure, confidentiality, etc.

General Sustainability

- What do you think makes DMIS sustainable at your school?
- What are threats to sustainability at your school?
- What might contribute to a schools' decision not to continue the program?

Challenges

Partnerships

- Who are the current or potential partners within your school? Who are you strongest partners internally? Which groups do you wish had more buy in?
- Who in the school, the arts community, or the broader community currently does not recognize and value the work of the program but is in a position to provide particularly vital support?
- Which community leaders might DMIS be relevant to? Have you engaged with these people or organizations in the past? How? To what result?
- Is your broader local community aware of DMIS? Are they engaged with it?

Funding stability

- How do you pay for your theater program? What are the costs and where does the money come from?
- If all that funding dried up tomorrow, would your program continue?
- What are the short-term funding goals of the program? Long term?
- Who has emerged as critical to your funding process, either because they are a source or a conduit?

Strategic Planning

- What is your long-term vision for DMIS? Does your leadership have a long-term vision for DMIS? Can you describe it?
- To what extent do you and your team contribute to or drive that vision?

Efficacy (Gibson & Dembo, 1984)

- What do you attribute the success of your DMIS program to?
- Did the year one residency training contribute to the skills necessary for the success of your program? How?
- When students aren't responding to the work, if you really put forth the effort can you turn that around?

Arts Perception (Oreck, 2004)

- Is it important for students to engage in theater activities? Why?
- Are there many students in your school who would especially benefit from more arts activities in the classroom?
- Do you consider yourself a creative person? An artist?
- Do you feel confident in your ability to facilitate theater activities? Music? Dance?

Strengths

Preparedness

- The teacher group reports feeling well prepared for the DMIS program. What specifically has led to this sense of preparedness? Does this impact program sustainability?
- How do you stay current on your practice as it relates to DMIS?
- Are there any elements of programming or your work for which you personally feel less prepared?

Collaboration

- The teacher group reports strong collaboration skills. In what ways do you collaborate with each other? With teaching artists? Others?
- What skills, mindsets, or traits lead to good collaboration in your DMIS program? How does this help with program sustainability at the school level?

Program Adaptation

- Teachers ranked program adaptation as high. In what ways have you adapted your DMIS/theater program?
- Have the adaptations been improvement?
- In what ways do you use learning theory, research, or other programming models to adapt your program?

Other Stakeholder Group Responses

- Teaching artists ranked Satisfaction with School Level resources as the lowest scale on the survey, and it was a close second-to-last for the arts organization staff. What do you attribute that to? Is that surprising or expected?

Lug Nut review (Seidel et al., 2000). Use as a follow-up as specific examples arise:

- Who puts time into attending to this element of sustaining the program? How much time?

- Have you followed through on plans made in the past related to this element of the program?
- How could sustaining this element of the program be made easier in the coming year?

Appendix C

Teacher Recruitment Email

Dear Disney Musicals in Schools Educators,

I hope your school year ended well and your summer is off to a good start! I am a graduate student at Johns Hopkins University pursuing an Ed. D. in entrepreneurial leadership in education. In my professional context, I am the Director of Education and Audience Engagement at Disney Theatrical Group, where I developed the Disney Musicals in Schools program.

As part of my dissertation, I am conducting a brief study to better understand which factors lead schools to continue or discontinue their theater programs in the years following their participation in Disney Musicals in Schools. This study is intended to lead to programmatic improvements and ultimately provide more theater education opportunities to students from low socioeconomic backgrounds across the United States and in the UK. I have received approval from the district IRB to move forward with this study.

The first portion of the study is a questionnaire that takes approximately 10 minutes to complete. As a past or current participant in the program, I am inviting you to participate in this study which will help shape future program improvements.

Participation in this study is voluntary and you may opt out at any time without consequence. The study is anonymous, and the results will not include any identifying information. The first question in the survey asks you to provide informed consent, as outlined in the attached form.

You can access the questionnaire here: link was included in the email.

Thank you for completing this survey by June 29. Later this summer, I will additionally be reaching out about an opportunity to patriciate in a second optional component to this study, which is a focus group interview.

Thank you for everything you do for your students and this program. I appreciate your time and consideration—please don't hesitate to reach out with any questions.

Teaching Artist Recruitment Email

Dear Disney Musicals in Schools Teaching Artists,

I hope your summer is off to a good start! I am a graduate student at Johns Hopkins University pursuing a doctoral degree in entrepreneurial leadership in education. In my professional context, I am the Director of Education and Audience Engagement at Disney Theatrical Group, where I developed the Disney Musicals in Schools program. I've met many of you through our wonderful collaboration with your arts organization over the years.

As part of my dissertation, I am conducting a brief study to better understand which factors lead schools to continue or discontinue their theater programs in the years following their participation in Disney Musicals in Schools. This study is intended to lead to programmatic improvements and ultimately provide more theater education opportunities to students from low socioeconomic backgrounds across the United States and in the UK.

The first portion of the study is a questionnaire that takes approximately 10 minutes to complete. As a participating teaching artist in the program, I am inviting you to participate in this study which will help shape future program improvements.

Participation in this study is voluntary and you may opt out at any time without consequence. The study is anonymous, and the results will not include any identifying

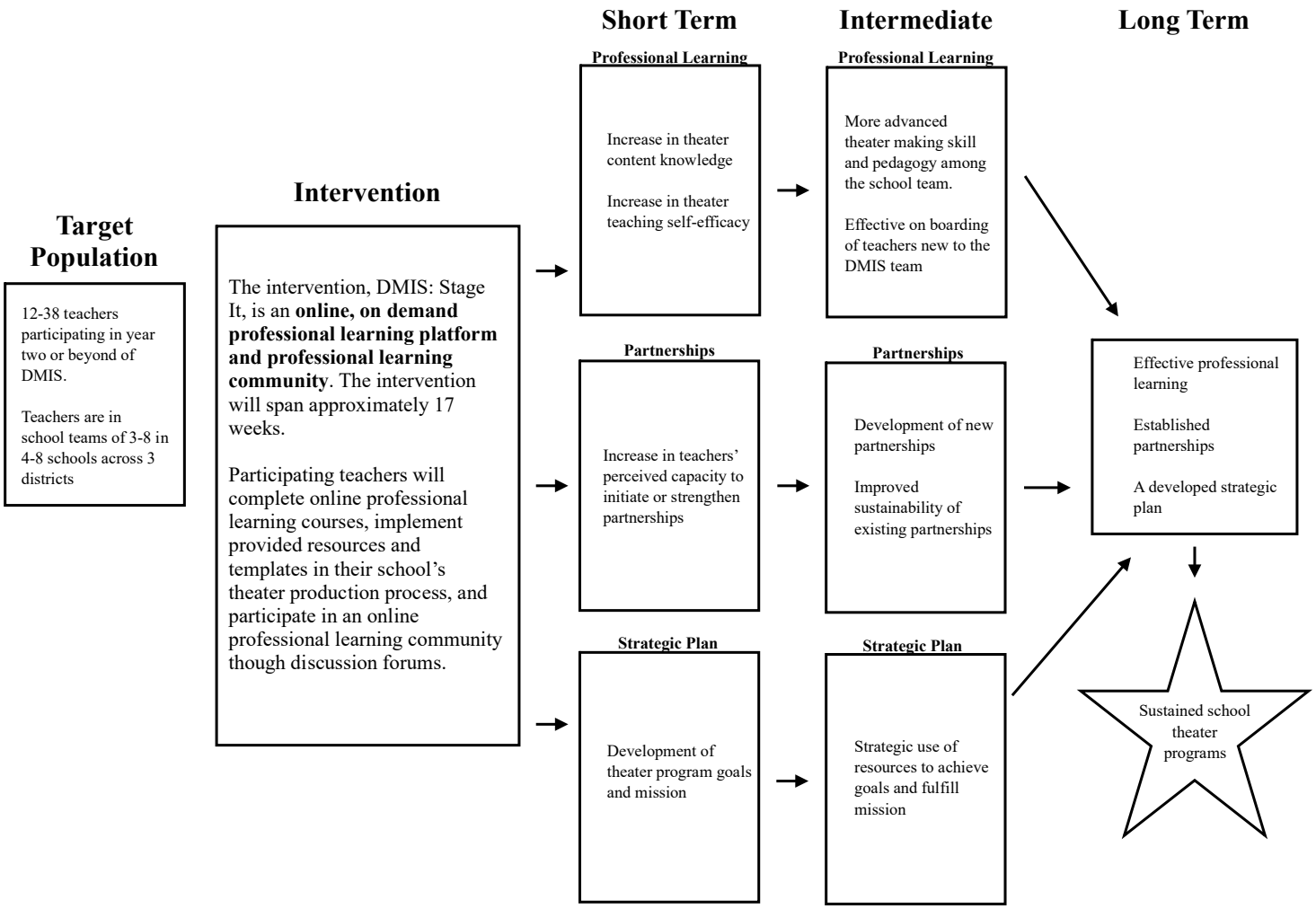
information. The first question in the survey asks you to provide informed consent, as outlined in the attached form.

You can access the questionnaire here: [link was included in the email]. If you are interested in participating, thank you for completing this survey by June 14. Some of you are past participants of the program, but your thoughts will still be invaluable. Later this summer, I will additionally be reaching out about an opportunity to patriciate in a second optional component to this study, which is a focus group interview.

Thank you for everything you do for your students and this program. I appreciate your time and consideration—please don't hesitate to reach out with any questions.

Appendix D

Theory of Treatment for the Disney Musicals in Schools: Stage It intervention



Appendix E

Disney Musicals in Schools: StageIt! Platform Logic Model
Situation: Low SES elementary schools lack theater programs. DMIS aims to seed sustainable theater programs in such schools. Although initially successful, as schools advance through time they begin to discontinue their theater programs. Lacking partnerships, absent strategic plans, and dissatisfaction with school resources contribute to the problem. Participants described teacher turnover, high workload, lack of partnership connections, stress, burnout, and lack of time as explanations of the problem.

Inputs	**Outputs**		**Outcomes: Impact**		
	Activities	*Participation*	*Short*	*Medium*	*Long*
Development: • Funding to develop platform and content • Staff time to develop platform content (e.g., video production, learning content, template development) • Development firm to build platform, including demonstration and instructional videos, tools and templates, and discussion forums. **Implementation:** • One 45-minute kick off meeting with participants. This session requires meeting space and video conference capability. • Regular participant access to computers and internet. • Incentives for participating teachers (as allowed by IRB).	**Teachers will:** • Participate in a 45-minute launch meeting • Complete the *foundations of musical theater* course and apply the strategies in context (approx. one hour). • Complete the *foundations of your role* course and apply the strategies in context (approx. one hour). • Implement the partnerships and strategic planning tools and templates from the courses, and other assets from the *in-rehearsal* section. • Articulate and record their theater program's goals and mission, as prompted by the strategic planning resources. • Participate in the online professional learning community discussion forums throughout the 20-week intervention. **DTG Staff will:** • Monitor course progress and provide support. • Develop discussion topics and participate in forums and provide synchronous opportunities.	**Teachers:** • 12-38 teachers across four-to-eight schools in three districts who: • are in school teams of three-to-eight teachers each AND, • are in schools that have completed their initial year of the DMIS program and are committed to producing a musical play this year AND, • will commit to implementing the intervention over the course of the approximately 17-week rehearsal process. **DTG Staff:** • Various members of DTG's Education department, including administrators and teaching artists.	• Increase in teachers' theater content knowledge, as shown by improved scores on pre and post course assessments. • An increase in teachers' theater pedagogy self-efficacy, as measured by pre and post course self-efficacy scales. • An increase in teachers' perceived capacity to initiate new partnerships, as measured by pre and posttest partnership scales. • Teachers' development of theater program goals and mission, as demonstrated by articulation in focus groups and a pre and post and strategic planning scale. • An increase in teachers' theater pedagogy self-efficacy, as measured by pre and post course self-efficacy scales.	• More advanced theater making and theater pedagogy among the school team. • Effective on-boarding of teachers new to the DMIS team. • Development of new partnerships. • Strategic use of resources to achieve program goals and mission.	• Effective professional learning for new and returning team members. • Developed partnerships and community awareness of the program. • A developed strategic plan. • Sustained school theater programs

Assumptions
1) Disney will provide funding for the platform development.
2) Teachers will volunteer and will implement the intervention as agreed.

External Factors
1) Potential shifting corporate priorities could jeopardize timeline.
2) Participant attrition or lack of administrative support could impact implementation.

Appendix F

Focus Group One

Timing: Pre-intervention

Evaluation Component(s): Outcome

Outcome:

- How has staff turnover impacted your theater program?
- Describe the theater-specific professional learning you receive. Who provides it? How often do you participate in it? Has it improved your theater production experience?
- How would you describe the workload involved in producing a musical each year?
- Do you have any partnerships that support your theater program? How would you evaluate those partnerships?
- Do you have formal goals and a mission for your theater program? Do you think every member of your production team could articulate them? Do you think your school leadership team could articulate them?
- Which resources do you have most access to that help you produce your school musical? Which resources remain a struggle to secure each year?

Focus Group Two

Timing: After completion of the two fundamentals courses

Evaluation Component(s): Process

Process:

- How would you describe the quality of the StageConnect content thus far?
- How would you describe the relevance of the StageConnect content thus far?
- How satisfied or dissatisfied are you with the professional learning provided by the platform?
- How satisfied or dissatisfied are you with the resources provided by the platform?
- Are you applying the professional learning or resources in your production process? If so, how?

Focus Group Three

Timing: After completion of the intervention

Evaluation Component(s): Process and outcome

Process:

- How would you describe the quality of the StageConnect content?
- How would you describe the relevance of the StageConnect content?
- How satisfied or dissatisfied are you with the professional learning provided by the platform?
- How satisfied or dissatisfied are you with the resources provided by the platform?
- Did you apply the professional learning or resources in your production process? If so, how?

Outcome:

- How useful or ineffective do you think StageConnect was in building your theater content? How useful or ineffective do you think the platform would be for onboarding a new teacher without a theater background to your team?
- In what ways was the StageConnect professional learning relevant and useful to your theater production? In what was the platform unhelpful or irrelevant for your production?
- In what ways did the StageConnect platform decrease your workload related to your production? In what ways did the platform increase your workload?
- Was the platform useful or ineffective in initiating or strengthening partnerships?
- Was the platform useful or ineffective in developing goals and a mission for your theater program?
- Was the platform useful or ineffective for getting everyone on the same page with the goals and mission?
- Was the platform useful or ineffective in improving your access to the resources you need to produce a show?

Appendix G

System Usability Scale

This scale, adapted from Brooke's (1996) original, will be administered via Qualtrics and includes a five item Likert-type response option.

1. I think that I would like to use StageConnect frequently.
2. I found StageConnect unnecessarily complex.
3. I thought StageConnect was easy to use.
4. I think that I would need the support of a technical person to be able to use DMIS: StageConnect.
5. I found the various functions in StageConnect were well integrated.
6. I thought there was too much inconsistency in DMIS: StageConnect.
7. I would imagine that most people would learn to use StageConnect very quickly.
8. I found StageConnect very cumbersome to use.
9. I felt very confident using DMIS: StageConnect.
10. I needed to learn a lot of things before I could get going with DMIS: StageConnect.

Appendix H

This researcher developed content knowledge assessment will be administered pre and post intervention via the LMS.

Fundamentals of Musical Theater

1. What are the goals of production meetings? (Check all that apply)
    a. To make the scenery and costumes
    b. To plan with the full production team
    c. To adapt the script
    d. To review student behavior and reassign roles as necessary
2. What are the benefits of facilitating an Introduction to Musical Theater workshop for your students? (check all that apply):
    a. Introducing the story of the play to the students
    b. Determining the teacher team's production roles
    c. Recruiting students for the theater program
    d. Securing administration support
    e. Assessing students' singing, acting, and dancing skills
    f. Determining what changes to make to the script
3. Auditions are (check all that apply):
    a. Ineffective for elementary aged students
    b. Inevitably high stress for students
    c. A low stress assessment of student strengths and interests
    d. Time consuming
    e. Hard to manage

4. Which of the following formats is an effective rehearsal structure?
    a. First warm up, then teach the music, then reflect. Add the choreography in future dance specific rehearsals.
    b. First warm up, then review some previously learned content, then teach new content, then reflect.
    c. First warm up, then ask the students what they'd like to work on for the day. End with a reflection.
    d. First warm up, then start running through the show from the beginning and pick up teaching new content where you left off. End with a reflection.
5. Which of the following are effective strategies for rehearsing a musical with young performers? (check all that apply)
    a. Teaching with call and response
    b. "Flipping" the classroom so that students develop their staging at home and rehearsals are used to put it all together
    c. Team teaching across theater disciplines
    d. "Chunking" the content into small pieces
    e. Administering tests and quizzes to students to check their retention of the material
6. What is a tech rehearsal? (check all that apply)
    a. A rehearsal in which actors focus on their technique
    b. An arts integration approach in which students explore the science behind stage craft
    c. A rehearsal in which all the lights, sound, scenery, and props are added
    d. A rehearsal without actors, just for the stage crew

Fundamentals of Directing (only directors take this)

7. Which of the following are the job of the director? (check all that apply)
    a. Fundraising for the theater program
    b. Making final casting decisions
    c. Blocking the show
    d. Leading the creative team
8. What is a directorial concept? (check all that apply)
    a. The director's preferred acting method
    b. The director's creative vision for the show
    c. The way the director structures rehearsals
    d. The blocking technique used by the director
9. A show breakdown is: (check all that apply)
    a. A summary of the plot
    b. A tool that lists the scenes, songs, characters, location, plot, and more
    c. A phenomenon that occurs during dress rehearsal when everything goes wrong
    d. Useful when creating a rehearsal schedule
10. Successful approaches to blocking include: (check all that apply)
    a. Having the cast create new blocking at each rehearsal
    b. Asking the students questions that inform their movement
    c. Coming prepared by having entrances, exits, and major plot points pre-blocked
    d. Keeping the blocking the same for each scene

Fundamentals of Choreography (only choreographers take this)

7. Which of the following are the job of the choreographer? (check all that apply)

a. Creating all the dance in the show

b. Teaching the music when the music director is absent

c. Teaching all the dance in the show

d. Staging scenes

8. What is a choreography map? (check all that apply)

a. A document that tracks one character's choreography for the whole show

b. A document that organizes a song by musical phrase and characters, and captures your thoughts on positions and movement

c. A document that tracks your choreography from past projects for easy reference

d. A document that allows you to quickly notate choreography you find online or at other performances

9. Successful techniques for creating student devised choreography include: (check all that apply)

a. Asking students to free-style dance and selecting useful moves

b. Having the students work in small groups to develop movement to a small piece of music

c. Selecting one student to choreograph a song and teach it to the cast

d. Asking the students to create poses based on prompts, which you then add simple movements to

10. How do the choreographer and music director work together in the chunking method? (check all that apply)

a. They divide the song into chunks, teaching half the cast in separate spaces and switching students halfway through rehearsal.

b. The choreographer teaches a small chunk of content while the music director sits out, then they swap.

c. The choreographer and music director volley back and forth while teaching the music and movement to a small portion of a song. While the music director is in the lead, the choreographer supports his or her teaching.

d. They divvy up the songs in the show, and are each responsible for teaching the music and movement to their songs.

Fundamentals of Music Direction (only music directors take this)

7. Which of the following are the job of the music director? (check all that apply)

a. The musical storytelling in the show

b. Teaching the show's music to the cast and helping them to sound their best

c. Adapting the music by making cuts and edits

d. Teaching choreography when the choreographer is absent.

8. What are some of the various approaches to music directing a school musical? (check all that apply)

a. Teaching using call and response

b. Teaching using a piano to reinforce the melody line

c. Teaching using the provided music tracks

d. Having the students sing the songs they know from the film version of the story

9. Why do characters sing in musical theater? (check all that apply)

a. The tradition stems from the commercial theater, where producers learned they could justify a higher ticket price if the show included music.

b. Because their feelings build so much that words alone are insufficient.

c. Because music makes a show more engaging

d. The tradition stems from the great depression, in which out of work musicians found an employment opportunity on Broadway

10. How do the music director and choreographer work together in the chunking method? (check all that apply)

a. They divide the song into chunks, teaching half the cast in separate spaces and switching students halfway through rehearsal.

b. The music director teaches a small chunk of content while the choreographer sits out, then they swap.

c. The music director and choreographer volley back and forth while teaching the music and movement to a small portion of a song. While the choreographer is in the lead, the music director supports his or her teaching.

d. They divvy up the songs in the show, and are each responsible for teaching the music and movement to their songs.

Fundamentals of Stage Management (only stage managers take this)

7. Which of the following are the job of the stage manager? (check all that apply)

a. Creating the production schedule

b. Creating the rehearsal plan

c. Sending out rehearsal reports

d. Keeping time during rehearsal

8. Approximately how many hours of rehearsal should you plan on for a 30 minute musical with elementary school performers?

a. 15 hours

b. 30 hours

c. 45 hours

d. 60 hours

9. What does it mean to "call the show"?

a. Determine when the cast and crew are ready for performance—the moment in time in which they do not need any more rehearsals

b. Marketing the show to the community

c. Giving the stage crew their cues during the performance

d. Calling the creative team to remind everyone about rehearsal

10. What does it mean to be "on book"?

a. Producing the show "by the book" (e.g. following all licensing requirements)

b. Following along in the script and prompting lines or cues when someone forgets

c. Being responsible for photocopying the scripts and distributing them to the cast and crew

d. Researching the show's setting, historical context, etc.

Fundamentals of Production Management (only production managers take this)

7. Which of the following are the job of the production manager? (check all that apply)

a. Set design

b. Overseeing the student stage crew

c. Costume and prop design

d. Blocking (staging) the show around complex scenery

8. What are flats?

a. The floor boards of the stage

b. Large panels painted to look like the setting of the play

c. Traditionally they were small apartments in Broadway theaters in which the creative team lived during rehearsals

d. A style of backdrop painting that intentionally lacks dimension

9. Who should hear the accompaniment music first?

a. The audience

b. The performers

c. The crew

d. The house manager

10. Which simple light is easy to use and readily available to rent or borrow?

a. Cyclorama lights

b. Fresnel lights

c. Spotlights

d. LED lights

Fundamentals of Producing (only producers take this)

7. Which of the following are the job of the producer? (check all that apply)

a. Developing a strategic plan for the theater program

b. Developing and maintaining the production budget

c. Marketing the show

d. Fundraising for the show and theater program

8. What are important considerations when developing partnerships? (check all that apply)

a. Work with partners who provide collaborative advantage

b. Set goals together with the partner

c. Ensure leadership is supportive of the partnership

d. Ask the partner to take on responsibility for the program

9. What is a community event? (check all that apply)

a. An event that celebrates the theme of community inherent in elementary school musicals

b. A performance of your show expressly for the community

c. An event in which volunteers help with tasks related to your production (like painting sets and folding programs)

d. An event that might compete with your theater program—like a big football game on the same night as your show.

10. What is a strategic plan? (check all that apply)

a. A document that outlines your theater program's vision and mission

b. A document that outlines your theater program's goals

c. A document that outlines the processes necessary to meet your theater program's goals.

d. Unnecessary for theater programs in elementary schools

Appendix I

This survey combines researcher developed demographic questions, a modification of Yoon and Evans' (2012) domain specific teacher self-efficacy scale, and two subscales from Schell et al.'s (2013) PSAT. The scales will use a seven-point Likert-type response, and the survey will be administered pre and post intervention via Qualtrics.

Demographics

1. Please select your school name and location.
2. What is your job at your school?
    a. Classroom teacher
    b. Music teacher
    c. Theater teacher
    d. P.E teacher
    e. Librarian
    f. Administrator
    g. Other
        i. Open response
3. How many years have you been teaching or working in the field?
    a. Less than 5
    b. 6-10
    c. 11-15
    d. 15-20
    e. Over 20
4. What is your role in the production? Please select all that apply.

a. Director
b. Choreographer
c. Music Director
d. Stage Manager
e. Production Manager
f. Producer
g. Other
    i. Open response

5. Please select the year your school began the Disney Musicals in Schools program.
6. How many years have you been involved in your school's Disney Musicals in Schools program?
    a. I was on the original DMIS team
    b. I joined sometime after my school had completed the first year of DMIS
    c. This is my first year participating in the theater program.
7. Prior to participating in your school's DMIS program, how would you rate your theater experience level?
    a. I had no prior experience or training in theater
    b. I participated in theater in school (K-12), but had no experience or training beyond that.
    c. I participated in theater in college or at the community theater level, and have some formal training theater.
    d. Theater is my primary expertise, and I have both formal training and experience.

Self-Efficacy

Pedagogical Content Knowledge SE

8. I can explain different aspects of the theater production process.
9. I can discuss how various creative disciplines affect the outcome of a theater production.
10. I can explain theater concepts well enough to be effective in teaching theater.
11. I can assess my students' theater work.
12. I know how to teach theater concepts effectively.
13. I can teach theater as well as I do most subjects.
14. I can craft good questions about theater for my students.
15. I can employ theater activities in my rehearsals effectively.
16. I can discuss how theater skills are connected to my daily life.
17. I can spend the time necessary to plan my rehearsals.
18. I can explain the ways theater skills are used in the world.
19. I can describe the process of producing a show.
20. I can select appropriate activities for use during rehearsal.
21. I can create rehearsal activities at the appropriate level for my students.
22. I can stay current in my knowledge of theater.
23. I can recognize and appreciate the theatrical concepts or skills in all subject areas.
24. I can guide my students' creative development through the rehearsal process.

Motivational SE

25. I can motivate students who show low interest in rehearsal.
26. I can increase students' interest in learning theater.
27. I can make students enjoy rehearsal more.

Instructional SE

28. I can use a variety of assessment strategies in rehearsal.
29. I can adequately assign my students to work in groups during rehearsal.
30. I can plan rehearsals based on students' learning levels.
31. I can gauge student comprehension of the content I teach during rehearsal.
32. I can help my students apply their theater knowledge and skills to real world situations.

Engagement SE

33. I can promote a positive attitude toward theater learning and rehearsals in my students.
34. I can encourage my students to think creatively during rehearsals.
35. I can encourage my students to think critically during rehearsals.
36. I can encourage my students to interact with each other during rehearsals.

Disciplinary SE

37. I can control disruptive behavior during rehearsals.
38. I can keep a few problem students from ruining an entire rehearsal.
39. I can redirect defiant students during rehearsal.
40. I can calm a student who is disruptive or noisy during inappropriate moments of rehearsal.
41. I can get through to students with behavior problems while leading rehearsal.
42. I can establish a classroom management system for rehearsals.

Outcome Expectancy SE

43. I am generally responsible for my students' achievements in rehearsal.
44. When my students do better than usual in rehearsal, it often because I exerted a little extra effort.

Partnerships

45. Diverse community organizations are invested in the success of our theater program.
46. Our theater program communicates with community leaders.
47. Community leaders are involved with our theater program.
48. Community members are passionately committed to our theater program.
49. The community is engaged in the development our theater program's program goals.

Strategic Planning

50. Our theater program plans for future resource needs.
51. Our theater program has a long-term financial plan.
52. Our theater program has a sustainability plan.
53. Our theater program's goals are understood by all stakeholders.
54. Our theater program clearly outlines roles and responsibilities for all stakeholders.

LISA MITCHELL

EDUCATION

Doctor of Education, Entrepreneurial Leadership in Education: Johns Hopkins University
Dissertation topic: Theater Program Sustainability in Under Resourced Elementary Schools

Master of Science, Educational Theatre: The City College of New York, CUNY
Thesis topic: Self-Efficacy & Theatre Production in Urban Elementary Schools
Recipient of the David J. Fox Award for Excellence in Research

Bachelor of Arts, Theatre: Arizona State University

PROFESSIONAL EXPERIENCE

The Johns Hopkins University, School of Education / 2019-2020

Teaching Assistant

Supported faculty with the delivery of online instruction to students in a doctoral program at a Research 1 institution. Responsibilities included discussion forum review, student support, participation tracking, and facilitating synchronous discussions.

Courses: Research Methods and Systematic Inquiry I (Spring, 2019; Spring 2020); Disciplinary Approaches to Education (Fall, 2019); Leadership in Educational Organizations (Summer, 2019)

The City College of New York, 2014-2015

Adjunct Instructor

Taught weekly research methods courses for master's degree students. Responsibilities included lesson planning, teaching, grading, and student support.

Courses: Seminar in Educational Research I; Seminar in Educational Research II

Disney Theatrical Group / 2006 - Present

Director of Education & Audience Engagement
Lead the Education & Audience Engagement department for theatrical division of The Walt Disney Company. Develop vision, mission, and strategies for the organization's education staff, products, and programs.

Develop community engagement efforts and audience development initiatives for the organization.

Cultivate relationships with community organizations across the globe.

Generate and oversee department budget, agreements, and other business affairs.

Identify and win funding opportunities for non-profit affiliates of Disney Theatrical education programs.

Create and oversee both philanthropic and income-generating educational offerings for a global audience of all ages.

Design, implement, and manage programs for public schools nationwide, especially New York City schools. Highlights include the development of workshops, residencies, and artist talkbacks for Disney's renowned Broadway shows, the creation of Disney Musicals in Schools-- DTG's flagship education initiative, which grows sustainable arts programs in urban schools, and the conception and development of *The Lion King Experience*, a first of its kind multimedia platform for theatrical learning.

Develop educational support materials, such as study guides and lesson plans, for Broadway and in-school productions.

Collaborate with DTG's Creative Development team to create musicals expressly for young performers. Ensure such shows are developmentally and academically appropriate for target age-range.

Identify and partner with professional performing arts centers across the country to curate DTG programs for new communities.

Generate and lead professional development experiences for school teachers, administrators, and Teaching Artists.

Develop experiential curriculum for college internship program. Ensure DTG's undergraduate and graduate interns gain a robust and immersive impression of theatre development and production.

Create and facilitate panels and discussions for universities.

Generate and implement assessment tools and processes for all educational staff and programming.

Recruit, hire, and manage department staff of 6 and teaching artist ensemble of 25.

Present at conferences around the world.

Previous positions include: Senior Manager of Education & Outreach, Manager of Education & Outreach, Education Coordinator, and Executive Assistant to the Senior Vice President and General Manager, Operations Assistant.

The If Ensemble Theatre Company / 2002 - 2006 Producing Director

Co-founded and built independent theatre company dedicated to showcasing new and established American playwrights. Produced & directed company's debut production, *Serenading Louie*, by Lanford Wilson.

Managed company programming, including popular weekly reading series.

Organized & managed fundraising efforts. Maintained company donor database & cultivated prospective donors.

Recruited playwrights, actors & directors for reading series and main-stage productions.

First Stage Milwaukee and Milwaukee Shakespeare Company / 2002 Teaching Artist

In an academy setting, taught analysis, comprehension and performance of classical text to children ages 8 - 18.

Created lesson plans tailored to the experience, developmental requirements and prior knowledge of each group.

Assessed each student throughout the term and provided written reviews and action plans for each child.

Created lesson plans tailored to each organization's needs.

INDUSTRY LEADERSHIP

The New York City Arts in Education Roundtable: Board Member, Present

The Music Academy of the West Alumni Enterprise Awards Program: Mentor, Present

The Broadway League: Education & Engagement Committee, Present

The Roger Rees Awards: Advisory Board, Present

The American Alliance for Theatre & Education: Board Member (Regional Programming Director), 2017-2019

Theatre in Our Schools: Co-chair, New York Conference, 2012-2014

The Broadway Green Alliance: Steering Committee; Co-chair, Education Committee, 2011-2014

Two Turns Theatre Company: Education Director, 2010 - 2014

SELECT SPEAKING ENGAGEMENTS & CONFERENCE PRESENTATIONS

Broadway Across America Biennial Conference, 2020

The Broadway League Education Forum, 2019

South by Southwest EDU, 2017, 2018

The Junior Theatre Festival, 2013-2020

The New York City Arts in Education Roundtable, Face to Face Conference, 2013, 2014, 2016, 2017, 2019

The American Alliance for Theatre & Education, National Conference, 2011, 2014, 2016, 2018

South Eastern Theater Conference, 2014

Educational Theater Association, National Conference, 2013

The Tennessee Performing Arts Center, 2012

Harvard University: Disney Musicals in Schools, A Case for Arts Education, 2011

PUBLISHED WORK

Mitchell, L. "Process through Product: How Theater Can Improve Self-Efficacy" in Teaching Theatre, 2015

Mitchell, L., & Cerniglia, K. "Pre-adolescent development in professional and amateur theatre" in Children in Entertainment, V. Emeljanow, Palgrave, 2014

Mitchell, L. "Seizing the Learning Opportunity" in *Newsies*: Stories of the Unlikely Broadway Hit, K. Cerniglia, Disney Editions, 2013

Mitchell, L. *Peter and the Starcatcher* Educator's Guide, 2012

Mitchell, L. & McCormack, J. *The Turn of the Screw* Performance Guide, 2010

Mitchell, L. (contributing editor), Disney JR. and KIDS ShowKits, Disney Theatrical Study Guides 2009-present